

# THE AMERICAN FARMER

ESTABLISHED 1819

SAM'L SANDS & SON, PUBLISHERS.  
SUBSCRIPTION, \$1 A YEAR.

BALTIMORE, MD., OCTOBER 15, 1891.

TENTH SERIES  
Vol. X.—No. 20.

## CROP SPECIALTIES.

Mr. Kerr's thoughtful paper on fruit culture on the Peninsula reminds me to rise and remark as I have often done that the whole secret of the trouble is "too many eggs in one basket." The culture of the peach has been allowed to occupy too large a proportion in the farming of the Eastern Shore counties. Fruit growing is no exception to the general rule that too exclusive a devotion to any one speciality is in the long run an injury to an agricultural community. Is there any reason on earth that such an agricultural paradise as Kent county, Maryland, should have a farming population plunged in debt because one crop failed one year, and the next year its superabundance has been almost as bad if not worse than a failure?

The man who grows just as much corn, wheat, oats, grass and fruit as he can give the best care to, and who plans all his work toward a fair general average without speculating for wealth on the chance of big returns from planting his whole land in one thing, I have always noticed is usually a man whose name is wanted in the bank, and who is never seriously cramped for funds. He may not get rich but he will have a happier home and live better than the man who has an army of tramps camped on his place every summer.

The small orchards that the owner gives the best care to are usually, too, the most healthy and produce the best fruit. The great orchards covering hundreds of acres are the nurseries of the yellows, the home neglected, and inferior fruit that glut the market, and stand in the way of the best development of home life on the farm. Is not the agriculture of the great peach growing countries of the Eastern Shore the worse for the great extension of this culture? Count up the money lost in the care of vast areas in trees with no crop, and the feverish rush and turmoil of a superabundant crop which bring no profit, and I doubt that the Eastern Shore is any better off financially for the great extension of the peach business. In agricultural improvement, that is, in the real improvement of her lands, I feel sure she has been the loser.

In a short trip to the Eastern Shore this past summer, I noticed that in the peach growing sections the men who seemed to be thriving best and improving their lands were the men who have not let the peach orchard have more than its share of the farm. And I also noticed that

in some sections where the peach fever has not absorbed the majority of the farmers agricultural improvement has made greater strides than in the great peach sections. I saw noble crops of grain and grass on lands that I remember as exceedingly poor. But fortunately these lands are not adapted to peaches. Just as in North Carolina the uplands of the West where cotton does not thrive have escaped the curse of the exclusive devotion to a great speciality, and are in better condition. No matter what the crop is, wheat, corn, cotton, tobacco and peaches, the devotion of a whole section to one speciality never yet developed the highest agricultural success.

W. F. MASSEY.

Raleigh, N. C.

## CLOVER ROOTS AND SUBSOILS.

Every day adds to the farmer's knowledge of plant growth, and every one to the chances of an observant one's success in it. Science has long since shown and practice confirmed its truth, that soils are shallower or deeper, and these last yield the better crops. Where land has been "skimmed" for years a deep cultivation sometimes gives astonishing results; but, with thin soils, very frequently a most lamentable failure.

Subsoils differ equally with surface ones in their fertility, and the best of them may not be reached under feet where the plow never reaches. This is especially true where sands are on the surface, that red clays of various richness are found from two to four or six feet below. Hence, to reach these, plants of long root-growth must be used, and of these the clovers afford the best results. With a view of laying their real practical value before farmers we present the following facts from the annual Report of the Minnesota Agricultural Station for 1888.

	Age	Height	Length of Roots.
Mammoth Clover.	1 mo.	1 1/2 in.	5 roots, 5 to 7 in.
	2 mo.	5 in.	2 feet.
	5 mo.	7 in.	4 ft. 9 in. for deepest root.
Alsike Clover.	1 mo.	2 in.	Tap root 9 1/2 in. side root 2 in.
	2 mo.	6 in.	2 feet.
	5 mo.	12 in.	2 1/2 feet.
White Clover.	1 mo.		Tap root 4 1/2 in.
	2 mo.		Tap root 2 ft.; numerous side branches.
	5 mo.		7 in.; side roots 2 to 4 in.
Red Clover.	1 mo.		2 feet.
	2 mo.	12 in.	2 feet.
	5 mo.	8 in.	5 ft. 8 in.

These indicate the necessity of breaking the "hard pan" found immediately beneath the usual depth of plowing in most lands, although a very wet season will generally soften them to let the roots descend.

## RAISING CORN VARIETIES.

Corn may be planted at the proper period, skillfully and intelligently cultivated, but may not be adapted to the climate. This is strikingly illustrated in the experiment conducted at the Experiment Station in Arkansas in 1890, where out of forty-one varieties grown, thirty originated out of the State, and eleven in it. Of these, the seed grown in the State averaged 29 bushels per acre, and that from abroad 22.

In 1890, in Illinois, the yield varied from 41.7 bushels per acre, with Queen of the North, to 85.2, with Burr's White. The nubbin varied from the California yellow where the nubbin exceeded the good by one-fourth to the Clark Co. Champion, where they amounted to only one-eighth. In twenty varieties, the weight per 100 ears varied from 36 lbs. to 59 lbs.

At Ithaca, N. Y., in 1886 corn obtained the following results: 59 days with an air temperature of 59°; a soil temperature of 72° at 3 inches (usual depth of corn roots), and a rainfall of 7.53 inches; and 6.5 hours of average daily sunshine. And in Pennsylvania in '88 the temperature of the corn growing season was 64°; rainfall 23.7 inches; with 46 days of cloudiness, and 72.94 of humidity.

These details are not so valuable as if the crops had been given, whether good, average or poor. At least, they permit the way to a line of investigation that may be followed out with material and positive advantage. There are many farmer-readers with records in possession, that only need careful examination, from which to deduce most valuable lessons in the cultivation and treatment of the corn crop. Evidently there has been too much following of old notions suited to better soil and a somewhat different temperature.

## NOTES FROM PROF. MASSEY.

It seems to be my fate to try to keep X. straight. Now that he seems to have finished up the temperature and rainfall, he talks of "long-leaved" pine prevailing on the Eastern Shore of Maryland and Virginia. Did X. ever see a "long leaf" pine on the Eastern Shore? I have been all over that modern Canaan, but never saw one there in my life. There are varieties of pine than which have longer leaves than some others there. The "long leaf" pine of X. is either the yellow pine (*P. Mitis*) or loblolly, "old field," (*P. Taeda*.)

The "long leaf" pine is not found north of North Carolina. It is *Pinus Australis*, and is the great turpentine pine of Eastern and Southern coast forests. "X." is all right, however on the sweet potato vines. I believe they would make fine ensilage, but the question of curing them as hay is hard to solve.

Cow peas make the best ensilage for cows and a mixture of cow pea and corn ensilage is just perfection, a complete ration, which corn silage alone is not. Though belonging to an entirely different botanical family the sweet potato is as fond of potash as an Irish potato. The sweet potato of Eastern Virginia raised in fine "shatters" are a long way handsomer and better than the "Bay-duses" raised here, and I often long for some of the potatoes I used to get on the Eastern Shore. The same varieties grown here are not so good as there. Here they get so dry, tasteless and corky that they are hard to eat. Hence the preference of North Carolina people for the mushy but sweet yams.

The yellow sweet potato, as grown in Virginia and Southern Eastern Shore of Maryland, are the best. I think the analysis of crab grass hay is much too low for the grass as it grows here and southward. It is well known that grasses change their character largely with the latitude. The Velvet grass, *Holcus Lanatus*, which is perfectly worthless from Virginia northward is a good nutritious grass here, and in the far South is one of the very best. Crab grass hay in this latitude is a very good hay, much better in results than Timothy would be grown here.

W. F. MASSEY.

Raleigh, N. C.

## CORN ROOTS.

It is generally admitted that the plants, like trees, get most of their food, by which their growth and seeding is promoted, through their roots. There are thousands who do not know either the length or number of roots of the corn they cultivate, nor their manner of growth, whether tap rooted, like beets and turnips; all surface roots like the beech, or a combination, like the last two. To the first class corn belongs until the surface roots start, and then, or soon after, the tap root rots and drops off, having fulfilled its office in starting the surface roots. Experiments in Illinois show corn 12 inches high had ten roots. The length of root of a stalk 4 1/2 inches high was 12 inches. One stalk, with one leaf expanded and one expanding 2 1/2 inches high had four



roots. With no leaf expanded one 1/4 inch high had three roots; one 7 inches high 11 roots. A stalk planted May 15th was on June 14th 28.5 inches high, and had twenty-one roots; and one planted on the same date one inch deep, had on June 28th, with a height of 65 inches, thirty-five roots. In 35 days of cultivation these roots ranged from 40 to 53 inches in length, and two-thirds of 179 roots would have been broken off if it had been cultivated 6 inches from the stalk and 4 inches in depth.

The relation of air and soil temperature to corn growth is shown in the Report of the Pennsylvania Experiment Station for 1887, where corn attained its maximum height when the average heat was 70°; rainfall 8.3 inches, and a cloudiness of less than one-half. In '88 it obtained its mean height in 92 days; average temperature, 67°; rainfall, 11.5 inches; and a cloudiness of nearly 5 on a scale of 10.

#### GRASSES AND FORAGE PLANTS AT THE EXPERIMENT STATION.

Prof. Hayward, in his recent report, gives the following:

##### THE FORAGE GARDEN.

A. *Grasses*.—A detailed description of the various grasses growing in the forage garden was given in the report for 1889, and it is only necessary to mention again those which have given good results the past season.

The three Bent grasses, R. I. Bent, Red Top, Creeping Bent, made a very good growth. Red Top and Creeping Bent are very much alike, if not identical. These grew to a height of one and one-half to two feet, forming a close, compact, unbroken sod. Meadow fox tail, quite early, formed a good sod; it is better for pasture than mowing. Sweet Vernal, a common, well established grass, is very early, but like the last, is a pasture grass. The annual sweet vernal was a failure. Tall Oat, one of the most perfect plots, grew fully four feet in height, was in condition for cutting June 10th, and fully ripened soon after; this grass is recommended for use as part of the meadow mixture, but should not be sown with Timothy, as the latter is much later. Bermuda grass:—Probably owing to the very mild winter of 1889 and '90, this grass did not die out, but formed an excellent sod, even and compact, and reached a height of ten inches. It is well adapted to grazing; in plowed land its fault is in spreading into surrounding territory, where it is not wanted. Orchard grass and Timothy made excellent growth, and both are recommended for cultivation in this section. Johnson grass gave two fully matured crops; if it had been cut three times, one-third more weight would have been obtained and all of a much more palatable forage, as the stems are very coarse and hard when allowed to mature.

B. *Clovers*.—The standard clovers, Medium red, Giant red and Alsike, presented a good appearance early in the season. The Giant red is from one to two weeks later than the Medium clover; it has larger leaves and stems, and a more rank growth,

generally. The hot and dry period in summer killed the Alsike and somewhat injured the others. The Crimson clover sown in 1889 was bright and green through the entire winter; it started into growth very early in the spring, producing stalks a foot or fifteen inches high, each terminating in a head one to two inches long, of a beautiful crimson color. Being an annual, as soon as the seed matured, the plant died and the seed then dropped, germinated and grew, forming a plot superior to the old one, and with promise of abundant foliage next season. No weights were taken, and the hay-producing qualities of the plant were not determined. More extended areas have been sown on the college farm, and it is to be hoped that the data may be obtained on this point.

Lucerne or Alfalfa, which has given such good results in some sections of the country, has not been successfully grown here; under very good conditions it has given only moderate returns.

Japan clover, or *Lespedeza Striata* was sown for summer pasture with very satisfactory results. With the intention of producing increased amounts of seed by early sowing, about two acres was sown February 28th, on an old pasture sod. An adjoining plot of about the same area was sown March 20th. There seemed to be very little difference in the amount of pasture obtained from these two plots, and no marked difference could be observed in the amount of seed produced. The long season favored the maturity of a much larger quantity of seed than in 1889. But although there appeared to be so little seed produced in 1889, a fair growth was obtained without additional seeding in 1890.

C. *Forage Plants*.—Unknown Pea. About fourteen acres were sown with the Unknown Pea, for plowing under as a green manure. The Peas were sown in rows 3 feet apart, and the plants about one foot apart in the row; a light rain with a hot dry period following, baked the surface so hard that less than one quarter of the plants succeeded in forcing their way through. Those which did come up, made a satisfactory growth but the crop was small as a whole. A small crop of this Unknown Pea, in the grass garden, made a heavy crop and fully matured its seed before frost. This is the first seed that has matured at this Station.

Soja Bean. *Soja hispida*. For the past three seasons this valuable Japanese forage plant has been grown at this Station. In 1888 and 1889 the conditions were not favorable and only medium crops were secured. The land taken this year for the crop was a fairly uniform plot of nearly three acres, located east of the Station building. It was plowed in the fall of 1889. On June 2d, it was thoroughly harrowed with a Clark's Cutaway Harrow. Being still rough and with many briars growing, it was plowed again the next day. It was then harrowed with a Thomas smoothing harrow, which left the soil in very fine condition.

Twelve plots, 55 x 198 feet were laid off, side by side, and these were divided into equal sections by a line running through the entire series, from north to south. This gave 24 plots, each 55 x 99 ft., and contain-

ing one-eighth of an acre. Rows two and one-half feet apart were marked off across the plots. The seed beans were dropped with an Eclipse drill from one to two inches apart in the rows; no fertilizer was used.

The seed germinated well, and a uniform and continuous growth was obtained; no blight appeared as in 1888, the foliage being bright and vigorous until harvest. The best portions attained a height of fully three feet, and an average of two and one-fourth feet was made over the entire field. The land was kept lightly cultivated all summer. When cut, September 16th, the plants were in full bloom. As there was no fertilizer applied, and the conditions under which the plots were cultivated were identical, the yield of the several plots is taken as an index to the quality of the soil and is used as a basis upon which to make subsequent experiments.

In order to harvest in one-eighth acre plots, it was necessary to cut the beans with a scythe. They could have been cut with a mowing machine, and in this way the harvesting would have been very rapid. The bean plants were cut into half-inch lengths, and put into a silo with alternate loads of corn.

##### YIELD OF SOJA BEAN, PER PLOT.

PLOT NUMBER	Sect. I		Sect. II	
	lbs		lbs	
1	2014	1727		
2	1570	1060		
3	1270	1370		
4	980	1060		
5	1094	1075		
6	1030	1434		
7	1440	1060		
8	1030	991		
9	940	1033		
10	820	780		
11	640	654		
12	726	654		

The largest plot yield, at the rate of over eight tons per acre, far exceeded any that has been secured heretofore at this Station. Taking into consideration the highly nitrogenous character of the plant, the feeding value of this crop of eight tons per acre is equal to at least sixteen tons per acre of fodder corn. The total yield of the three acres as thus grown, was thirteen tons. On good soil, with proper manuring, the plant would undoubtedly give a much larger yield.

##### REVIEW OF A BACK NUMBER.

Growing onions at an expense of 10 cents per bulb, is a text for an agricultural sermon. The quotation from an amateur horticulturist that did it, having married the money to do it with, is a satisfactory explanation, but giving the *modus operandi* for others to do likewise, that didn't marry that kind of a wife, might be their financial ruin. There have been a great many that had to leave their farms and go to store-keeping, lawyering, preaching, or doctoring, for the very reason that the expenses were too much for them.

Col. Beverly stated at one of our farmers' meetings that he made it profitable feeding cattle in the field. He then, to keep up with the times, built barns, tied up his steers, hauled

\*The Latin is used to give the sermon a preacher tone.

the feed from the fields, cut it up and served them with regular rations, then hauled the manure back to the fields, and the expense made it unprofitable. There is plenty more experience of the same sort, although it is experience those that have it are willing to give away; but very few will take it, preferring to buy their own, and the more it costs the better they are pleased until they get busted; then they say farming don't pay, and preachers can't make it if they do pray. Then there are a good many that like theoretical farming but not the practical, and don't care for the expense when the money comes easy, that are likened to a rich ship-owner's son who wanted to learn the sailor business, be a captain and spin yarns like his father's captains. He went out in one of his father's ships with a captain that was every inch a sailor and could teach him all there was worth knowing—showing him the ropes, how to haul them taut and belay, let them go, brace up, clew up, furl sail, box the compass, keep her up to the wind, let her go full, and try, tack ship and wave her, and other notions (but not half as much as a farmer has to learn), when one evening after sunset, a stiff breeze sprung up, and the main royal sheets were let go and the clew lines hauled up, the captain told his student to go aloft and furl the royal before it blew away. The young would-be-sailor stuffed his hands deep in his pea-jacket pockets, looked up at the sail which he could hardly see, as it was growing dark, but he could hear it flap, and said, "Captain, let her blow away, and I will pay for it." That is the kind of youth to learn farming.

JON E. CAKE.

##### ATTRACTIVE FARMING.

##### DRUDGERY NOT UNPROFITABLENESS DISTURBS THE BOYS.

The fact that the city population is increasing at the expense of the country is not a sign of social health. The boys leave the farm, in many cases, rather because farming has lost its attractions and become drudgery than because it is unprofitable. But it is the belief of the writer that agriculture can be made the most attractive of all occupations to the intelligent mind, as it is the most natural of all occupations. Drudgery is not attractive to any one, and he who fancies that the soil can be successfully cultivated without the exercise of much intelligence is likely to become a mere drudge. He gets the lowest prices for his productions because he has not mixed thought with muscle in his work. Selling at such prices, he loses the profit and toils in a kind of treadmill, ever struggling but making no advance.

Farming can be made more attractive, then, by putting more thought into work, even if less work is done, and consequently doing a work of a higher order. Brute force is cheap and poorly paid, while skilled labor is as valuable on the farm as elsewhere.

In the first place some knowledge of chemistry is indispensable to one who would cultivate the soil intelligently. Of course the more chemistry a farmer knows the better, but a profound acquaintance with this or



any other science is hardly practicable for him. Yet a few of the principles—a smattering, if you please—such as may be acquired in a few weeks study, will be of great value to a thoughtful man. To one who knows the primary principles and facts of this science, the farm challenges profitable as well as interesting thought. Work is no longer drudgery, for when the hands are occupied the mind is not vacant. Every acre of land presents its peculiar problem. The farm then becomes the laboratory, and there is a fascination about these improvements that adds zest and enthusiasm to whatever work is undertaken.

If the time has not already come when a knowledge of the chemical constituents of soils and manures is necessary to every farmer who would succeed, it has certainly come for the New England farmer. With our rapidly increasing population in America, we shall soon be compelled to cultivate the soil scientifically or starve.

Moreover, in its pursuit and practical application, he will find no less pleasure than profit, as well as an antidote for the discontent which makes many intelligent young men desert the most wholesome of all occupations.

There is not room for every well educated and intelligent man to earn a livelihood in the learned professions, neither would it be desirable, for there is room for the widest culture to find exercise on the farm.—*Vermont Watchman.*

## LIVE STOCK AND DAIRY.

### APPLES FOR ANIMALS.

In a recent number of the *American Agriculturist* appears an article by the late Col. F. D. Curtis on the subject of feeding apples to animals. At this season of the year, the subject may be worthy the attention of all who have refuse apples to dispose of. He says, "an orchard planted thirty-five feet apart will contain thirty-seven apple trees per acre. These trees, well grown, will produce five hundred bushels of apples. Apples have a food value, according to chemistry, says Prof. Sanborn as follows:

	Protein.	Fats.	Carbo-hydrates.	Fibre.	Total.
Corn.....	8.52	4.08	64.92	1.50	78.88
Apples.....	.62	.37	13.78	1.34	16.11

Compared with corn at a cent a pound and apples at ten cents a bushel, one dollar would buy 78.88 pounds of digestible matter in corn and 80.55 pounds in apples. The corn has more fat, but it is not so well balanced a food as the apples. Experience teaches me that apples are a complete food; for, when a boy it was my chore to feed the hogs, and my father used to winter a large number of swine on nothing but apples. These apples were of the common sorts, and there were two large bins, one of the softer kinds and one of the harder. Of course the softer sorts are fed out first. These apples were shaken off from the trees, the ground underneath first having been cleared of all stones so they would not bruise more than necessary, were handled carefully and then were put into the bins when perfectly dry. The badly bruised ones were left on the ground

to be eaten by the pigs. No one who has fed swine in this way can estimate the value of apples for animal food. They are excellent for sheep, and all young stock as well, and good for cows, notwithstanding the common prejudice against them. This prejudice has arisen from the fact that when cattle eat to many of them at one time they are apt to produce colic arising from the flatulency. Clover will do the same thing; yet no rational man will condemn clover as unfit for food. A few apples fed to a milch cow with her meal will promote digestion and assimilation. I would not at first give more than four quarts twice a day. This amount may be gradually increased to a peck, making half a bushel a day. The cow will give more and better milk for this extra food. They are fine food for colts, to be eaten with bran." We believe these hints are sound and practical; and what can farmers grow, in bearing years, with so little trouble and cost as apples? Apples are bulkier than corn, but the proportions of the nutritive elements in each are not so widely different.

### BOOM IN MUTTON SHEEP.

We look upon the present boom in mutton sheep as but a normal and healthful onward movement of the irresistible. It may be overdone and probably will be. Individual animals may mount to fabulous prices, and what has occurred with Short-horns, Jerseys, Merino sheep, and other breeds of live stock will be repeated in some cases with mutton sheep, but this speculative spirit seems incident to all forward movements in American agriculture, and we shall have to stand it, each one looking out that he suffers as little as possible when the pinch comes. We know of no animal, however, for which a man can pay somewhat more than its real worth, and yet make himself whole in time, than good representatives of the sheep family. There are three crops a year; three periods of dividend-paying in the flock; the culls, the lambs and wool. Of course, if too high a price has been paid in making the original purchase, these dividends must be smaller than they should be, but with good, intelligent care, such as our class of farmers are able to give it, if they will but do so, and with abundant feed such as our farms will produce if but asked aright, there is no reason to fear results. The American consumer is beginning to get a taste of high-grade mutton and the demand for such will probably run ahead of the supply for a long time to come. There is no retrograde movement in the tastes of a people. The motto of an average American is "The best is none too good," and if our flock-owners will only cater to the desire for a better grade of mutton the rewards are certain.—*Breeders' Gazette.*

### HOW EUROTISSIMA MADE 945 POUNDS OF BUTTER IN ONE YEAR.

In a paper read before the New York Farmer's Club, Dr. D. F. Appleton, the owner of the great Jersey cow, Eurotissima, told how he fed this cow during her wonderful per-

formance for one year. He said his motto was "high feeding for great results, not feeding for immediate profit." To obtain such results as he desired it was necessary to find a cow that had the constitution to take and digest large quantities of corn meal and the hereditary power to turn her food into butter rather than flesh.

Eurotissima was a small, thin Jersey, weighing at the beginning of her year's test, 820 pounds; at the end of it she had gained in weight 200 pounds. She made 945 pounds of butter in twelve months, and 27 pounds in one week. She received 24 pounds of grain each day; of which one-third was maize meal, one-third ground oats and one-third "middlings," i. e., offal from ground wheat. At the end of a month bran was substituted for middlings. The meal was mixed with cold water, and part of it spread over the hay or ensilage. During the season she had three hours per day in a fresh pasture, but she was never allowed to graze or eat hay to such an extent as to diminish her appetite for the meal. After the summer was over she was housed all day, but had exercise every day that was fine. Her hay and ensilage (she had both) was steamed and part of the meal thrown over it, and she had about one peck per day of either carrots or beets; the former being preferable when obtainable. The hay, etc. was given after the cow had taken her butter-producing food. With this treatment 4 pounds of milk made 1 pound of butter. On no occasion did the cow give more than 35 pints of milk per day. It was said that the quantity of ensilage was about 30 pounds per day, and the quantity of hay about 2 pounds. It was said that another great butter producer, the Mary Ann of St. Lambets, during a short test, would eat 18 pounds of maize meal per day. Mr. Appleton said that except Eurotissima, he never got a cow to eat eight pounds per diem through a whole year. Eurotissima calved April 5, 1889, was not served till November and held to the first service, and milked from April 22 to April 22

## POULTRY YARD.

### NOTES FOR THE SEASON.

The fall of the year is the most critical season with poultry, since the fowls are apt to be moulting and therefore not well protected from the cold rains and cool nights to be expected at this time; hence, precautions should be taken now to prevent any of the flock from contracting colds and roup, and having the seeds of other diseases implanted in their systems from exposure. During the summer, a few have, very likely, even with careful management, made their roosting-place in the trees or some unsheltered spot near the brooding ground. These should be caught and shut up in the hen-house so that they may become familiar with the premises and learn to roost there. This will be better for the health of the whole flock, and more comfortable for the person in charge, than waiting until the nights have become cold. Fowls are creatures of habit, and if, after being driven from

their usual roosting-place, they select another elsewhere, they will go to this substitute whenever made to leave their former roost. This trait makes it less difficult to induce them to roost in the hen-house after spending a few nights there.

More fowls should not be kept through the winter than there is ample room for, or than can be given proper attention. It should be remembered that unless there are out-buildings near to afford shelter when the ground is covered with snow, the flock will have to spend such days in their house. The number of fowls which may be profitably kept by one person will only be limited by the amount of accommodations available for the purpose, the facilities for feeding and cleaning the houses and the ability of the one in charge, not only to induce prolific laying, but to find ready sale for the eggs at highest prices.

A man of average intelligence, equipped with experience and suitable quarters for his flock, can keep from six hundred to a thousand fowls and make them pay well for the trouble and expense incurred, but it would not be advisable to attempt caring for so large a flock under any other circumstances.

The breed of poultry selected would have much to do with the degree of success attained, for all of those who have accomplished the best results in this direction have done so with thorough-breeds of some variety of fowls that has had the useful qualities suitable for the intended purpose highly developed. It is a singular fact that many who keep poultry give their flocks assiduous care so long as they are laying well, but lose enthusiasm when the hens begin to moult and are therefore not so prolific in this respect. The fowls should be brought through the moulting period in good condition to insure a supply of eggs during the winter. Wheat or screenings will be found the best food at this season; later, when frost has destroyed insect life and vegetation, a more varied diet should be given them, and upon cold, windy days, some of the grain scattered in the leaves and rubbish lying about the sunny corners near the hen-house, that the fowls may promote warmth in their bodies by hunting for it.

Market all surplus stock at the earliest opportunity and let the whole of your attention be devoted to the stock intended for layers and breeding next season. If you intend to invest in thorough-bred stock, get it now when breeders are trying in every way to reduce the number of fowls on hand, and will not refuse any reasonable offer. By waiting until spring you will have to pay about three times as much for the same number of specimens. The more thrifty buyers have found this out and profit by their experience.

H. R. STEIGER.

Laurel, Md.

### TO KEEP EGGS.

There are many ways and receipts advertised and sold to keep eggs from six to nine months, but as many are not only not satisfactory but absolutely worthless, it behooves one to move with care in these matters if they do not want to lose their eggs



by one of these so-called preservatives.

The method below has proven most satisfactory to me, having used it several seasons, and it is very simple and convenient to use. It consists of common salt, bought in barrels at from \$1 to \$1.50 a barrel, to which add one pound of pulverized saltpetre; mix it through about half of the salt at a time for convenience; procure a nice smooth sugar barrel; put about an inch and a half of salt in the bottom, then a layer of eggs, points down, just so they will not touch each other, then another layer of salt and eggs, and so on until the barrel is filled, covering over with an inch of salt and keeping in a cool, dry cellar; they should be put in the salt at least every other day as gathered, before they get stale, for if they get spoilt before packing you cannot expect them to come out fresh next winter.

At an egg contest some years ago at Birmingham, Eng., out of a lot of eggs kept by over forty different receipts for nine months, the eggs that had been kept in common salt proved to be the most satisfactory.

When they are taken out of the salt in winter they should be carefully wiped with a damp cloth and then kept in a room where there is a fire for twelve hours, in order that they may dry off thoroughly. They are hard to detect from fresh ones, are very satisfactory, and will sell at a grocery store for full price. Try them once and be convinced. It is a profitable investment.—*Poultry Monthly*.

## HORTICULTURE.

### DOES IT PAY TO SPRAY?

Prof. Galloway, of the Department of Agriculture, in a recent public address, said a large number of experiments have been made this season with a view to find the most effective fungicide and the most effective manner of treatment. Eight fungicides, each containing the same amount of basic copper as the ammoniacal copper carbonate solution, and two containing no copper, were used in comparison; also the Bordeaux in full with half strength, and early treatment with late treatment.

**TEN FUNGICIDES COMPARED.** The fungicides were ammoniacal copper carbonate solution, modified *eau celeste*, precipitated carbonate of copper solution, copper saccharate, glue mixture, Bordeaux mixture, copper acetate solution and copper chloride mixture. Each of these contained the same amount of basic copper, as the ammoniacal solution of copper carbonate, which as now generally used, is made by dissolving five ounces of carbonate in spirits of strong ammonia, and diluting with water to 45 gallons. The fungicides which contain no copper were potassium sulphide solution and sodium hyposulphite solution.

All these fungicides were used in comparative tests in a vineyard in Virginia, consisting of 7,000 Concord, Clinton, Norton, Elvira and Ives vines, nearly all of which are in first class condition, having been carefully pruned and cultivated every year since they were planted.

Despite this however, the fruit has always rotted, especially during the last few years, when almost the entire crop was destroyed. The 750 Concord vines selected for the comparative tests are now eight years old, planted 6 feet apart each way, and trained to stakes 8 feet high.

The results may be briefly summarized as follows: 1. All of the copper preparations increased the yield of perfect fruit from 20 to 50 per cent, while the non-copper solutions caused an increase of from 20 to 38 per cent; 2. So far as preventing rot is concerned, the copper saccharate, the glue mixture, the Bordeaux mixture, ammoniacal solution, modified *eau celeste*, in the order named gave the best results. Taking however, into consideration the question of injurious effects on the foliage and consequent growth of the vine, cost, ease of preparation and application. Bordeaux mixture heads the list, while ammoniacal solution, modified *eau celeste*, copper saccharate and glue mixture follow in the order named. In no case did the slightest injury to foliage, wood or fruit result from the use of the Bordeaux mixture, while with some of the other preparations the injury was exceedingly severe.

**BORDEAUX MIXTURE.** Experiments were made on 100 Concord vines to compare the effects of the Bordeaux mixture in full and half strength, and of early and late treatment.

Full strength, applied early, gave the best results, saving in one case 92 per cent of the crop and in another 100 per cent. The half-strength early treatments were nearly as good as the full strength early, the saving on the two plots being 83 and 90 per cent, respectively. The greatest amount of fruit on any of the untreated plots was 67 per cent.

The following figures show the average per cent. saved by each treatment of the Bordeaux mixture: 1. Full strength, early treatment, 96 per cent; 2. Full strength, late treatment, 26 per cent; 3. Half strength early treatment, 86.5 per cent; 4. Half strength, late treatment, 33 per cent; 5. Untreated, 15 per cent.

**PEAR-LEAF BLIGHT AND SCALE.** In regards to the experiments with these diseases, the fungicides employed were exactly the same as those used for the black-rot. The following is a summary of the results: 1. Of the ten fungicides used, copper saccharate, glue mixture, and ammoniacal solution, in the order named, gave the best results as preventives of leaf-blight, scab and cracking of the Pear. 2. Two early treatments—one before the flowers opened and one when the fruit is forming—gave nearly as good results as three treatments. 3. Three treatments, as ordinarily made, gave as good results as seven.

Every one of the copper preparations injured both foliage and fruit more or less, this being especially true of the ammoniacal solution and Bordeaux mixture. No injury whatever resulted from the use of potassium sulphide and sodium hyposulphite. The per cent. of perfect fruit, however, on these trees, was considerable less than on those treated with the copper preparations. We may conclude by saying that while

there is no difficulty whatever in cheaply and easily preventing the diseases under consideration, there yet remains to overcome the question of injury to foliage and fruit.

### EVAPORATED AND DRIED FRUITS.

Scarcely twenty years have elapsed since the first small evaporator was erected in the vicinity of Rochester, and since then the industry has extended to every town, hamlet and farm of importance, not only in Western New York, its place of inception, but of all the leading fruit sections of the Western Hemisphere. The success and importance of the work are due largely to the fine quality of the fruit, easily and cheaply obtainable in abundant quantities, and also to the enterprise of the producers in adopting new and improved evaporators and machinery, making thereby a grade fully as good as though preserved in fresh or matured state at a fraction of the cost. Fruit formerly unsalable or allowed to rot in the orchards forms principally the raw material, and thousands of tons of evaporated apples are made yearly from qualities hitherto almost entirely neglected, which are now profitable to the grower, for it is in the utilization of such products that the desiccation of fruit becomes a valuable and indispensable adjunct to every orchardist, and the business may be considered as yet only in its infancy. Almost every variety of fruit is employed. The apple, however, is the leading staple and is the most largely used.

Within a radius of forty miles of Rochester there are more than two thousand evaporators, ranging in capacity from the small farmhouse dryer of 25 bushels per day to the large steam evaporators drying 800 to 1,000 bushels each twenty four hours. These give employment during the autumn and winter months to at least fifty thousand persons, who receive from \$5 to \$15 per week according to experience and usefulness.

New factories are erected every season, proving the business to be profitable when properly and economically conducted. The production varies from season to season, but that from an average apple crop may be estimated at some thirty million pounds, worth at first cost at least \$2,000,000. To produce this quantity requires 5,000,000 bushels of apples in the fresh state, 15,000 tons of anthracite coal and the constant attention day and night, of a working force of men, women and children numbering from 40,000 to 50,000.

The water eliminated by the process equal 225,000 lbs. reducing the fruit to about one-eighth of its original weight, each one hundred pounds yielding, when properly evaporated, twelve pounds of the dried product.

The fruit is usually packed in cases, measuring two cubic feet, containing fifty pounds net, or the product of eight and one half bushels of green apples, and in this concentrated and compressed form is shipped all over the world. The advantage of the saving in freight alone will be apparent from the comparison of the cost of shipping

one case of the evaporated fruit to, say Liverpool, England, which at existing rates would amount to thirty cents, while the same quantity in barrels, fresh, \$2.25, and in the canned form \$2.10, without considering the deterioration of the fresh fruit and the dangers of fermentation and injury to the canned article, the fruit in the desiccated form being transported easily without danger of deterioration or decay.

The refuse of the apple, such as the cores and parings, is also dried, reaching a quantity of some 12,000,000 lbs. annually, and is used almost exclusively in the manufacture of cheap fruit jellies, so that not a particle is wasted.

There is also produced a grade of fruit known as "chopped apples," made almost entirely from cider apples. It is sliced and dried without being pared or cored, and is used in France in the making of cider wines and apple brandy. The annual production reaches some 15,000,000 pounds, worth almost \$500,000, of which quantity one half is usually shipped from Rochester.

The principal consuming countries abroad are Germany, England, Belgium, Holland and France. The West African and Australasian markets also take considerable and increasing quantities every year.—*Rural World*.

### NOTES ON WINDOW PLANTS.

The plants desired for winter bloom should be kept as much as possible from summer bloom.

One of the best window plants is always the Fuchsia. But if dug from a bed they will not bloom before spring. Grow them in pots in a shady place and in the fall time re-pot in a rich compost; sand, manure and rotted sod is often recommended, but any rich soil will do; water and set in a warm place. When they are well settled and begin fresh growth, keep them in a sunny window, and they will bloom well all winter. A kitchen window where there is abundance of steam suits them. Speciosa, Lord Byron and Beaconsfield are good sorts to select. But I specially love the old Rose of Castile.

Callas, kept all summer dry or at rest, will start with the greatest readiness. Keep them always abundantly watered, and give them strong light.

Geraniums on the contrary, must not be over-watered. There is but one demand that these plants emphasize, that is not too much moisture. But they require full sun. It is useless to expect them to bloom in winter if disturbed in the fall. Grow your winter bloomers in pots in summer.

On the whole there is nothing finer for windows in winter than Primroses. Let them rest all summer and re-pot in September in small pots. They like wood's earth and sand.

I would not recommend most people to try Carnations in winter. But if you have few other plant and give the Pinks special care and full light and air, with sandy soil, you may make a glorious success.

One of my delights is always the Bouvardia. A collection of these



softly-shaded delicate flowers is very pleasing. I have never seen one more charming than Hogarth, but cannot now find it in collections.

Roses for winter should be grown in pots in the summer, and kept from much bloom. Re-pot in very rich soil and keep outdoors till quite cold weather. The old China Roses are fine for winter. Hermosa, Catherine Mermet and Madame Watterville are good; also the glorious Papa Gontier. Agrippina and Louis Philipe are two fine old sorts that bloom well in pots.

For back seats, away from the full light you need Begonias and Ivies; the latter to twine about to cover bare places.

One of the very best of all window plants is the Hoya Carnosa or Wax plant. Plant in strong soil; set up on a high shelf; seldom re-pot, and train it by tying under the ceiling. I have grown them to carry 150 clusters at a time.

The very best bulb for the window is the Freesia. Pot in very rich earth and get them started in August. Four bulbs to five to a four-inch pot. It is a most delicious flower.

The old-fashioned Rose and Apple and Pennyroyal-Scented Geraniums are hard to find now, but they should be brought back into fashion. There were few things finer, and they have more uses than one.

If much attention is paid to bulbs, I prefer Tulips to Hyacinths. The moment the first flower of a Hyacinth spathe begins to decay, it emits a poisonous odor, a kind of sensuous smell.

Keep your pots always clean and do not let any water stand in the saucers, except for Callas. Water-soaked roots are the cause of much disappointment in window plants.

Try but few sorts. It is far better to have five hundred plants than twenty-five crowded.

House plants are healthy for you if healthy for themselves. That is, a healthy growing plant gives out pure oxygen and ozone, but a sick, diseased plant gives out malarious gases. Throw away sick plants. Tolerate only healthy ones.

A window case can be built with doors to shut when you sweep, if you care to stand the slight expense. Nothing hurts house plants more than dust in the pores.

To keep bugs off, keep plants in good growth; they rarely attack a thoroughly healthy plant. They are scavengers. But if they do, use Buhach and Tobacco dust.

For mildew, reduce the moisture and dust with sulphur. But there is nothing so generally useful as sprinkling your plants, say twice a day.

When you do water do it thoroughly; but do not be always putting on water. Use water about the temperature of your room.

Health is one item to be considered in growing house plants; cheerfulness another. They do us a great good by affording some pleasant occupation in the months that confine us.

Window cases have gone out of style; but they are very fine things for all that. Have a glass case built to set down over a plot of plants—a stand two feet by three is a fair size. Under here you may

grow Ferns or Begonias, or Caladiums and almost any house plant, except Heliotropes and Geraniums. A larger case with a door is very useful. Gauge the size to the expense you care to incur. I have had them built seven feet long and six feet high.

A very fine effect can be made and much pleasure secured by growing a few tropical plants. I had an Orange tree not two feet high with a dozen Oranges on it, in all stages of development, yellow and green. There are flowers nearly all the time. The ficus Elastica or Indian-Rubber Fig is another grand and easily managed house tree. One of the best vines is also tropical, the Philodendron, with a few cut leaves. It is a bearer of fine edible fruit when it can be kept at high heat.

The Morning Glory and the Tropæolum or Nasturtium make easily-grown vines and bloom delightfully. Sow the seeds in the fall and they are soon on the climb, and in full bloom.

Of all winter flowers, however, my own choice goes to the ordinary garden shrubs, forced. The best are the Lilac, Spirea prunifolia, Deutzia gracilis and bush Honey-suckles.

I recommend especially a small roof-garden built over a low story of the house, and covered with a lean-to of glass. These for cities are available and furnish not only flowers, but vegetables. I have seen them full of Cucumbers, Lettuce, Pie-plant, etc.

Many farmers can easily add to their houses with home labor and slight expense, a lean-to house which will be profitable for growing Lettuce and other vegetables, as well as flowers.—E. P. Powell in Popular Gardening.

## THE GRANGE.

LECTURER'S NATIONAL DEP'T.

### BUSINESS CO-OPERATION IN THE GRANGE.

The Grange, now nearing its 25th birthday, is not a one idea organization. It has its social, its educational, its moral, its political and its business sides, through all of which it is accomplishing its great mission of elevating the American farmer and American agriculture.

Proofs of some of its good work in the way of business co-operation are here presented. Since the year 1873 the following have been some of the business planks in the Grange platforms:

"For our business interests, we desire to bring producers and consumers, farmers and manufacturers into the most direct and friendly relations possible. Hence, we must dispense with a surplus of middlemen, not that we are unfriendly to them, but we do not need them. Their surplus and actions diminish our profits.

"We are not enemies of railroads, navigable and irrigating canals, nor of any corporation that will advance our industrial interests, nor of any laboring classes. \* \*

"We are opposed to such spirit and management of any corporation or enterprise as tends to op-

"press the people and rob them of their just profits. We are not enemies to capital, but we oppose the tyranny of monopolies. We long to see the antagonism between capital and labor removed by common consent, and by an enlightened statesmanship worthy of the nineteenth century."

One of the simplest systems of business co-operation practiced year after year in hundreds of Granges in single States is that of having a "purchasing" or "business fund" generally raised by contributions, and added to by the business profits; or in the form of stock subscriptions. Sometimes a few hundred dollars are hired and used for a time until a sufficient business capital is accumulated. As one of the teachings of the Grange is that "cash is king" and that all its business must be conducted on the "pay as you go" basis, it will be seen that with a small fund turned over several times in a year a large amount of business can be done.

Here are a few reports from Granges in Burlington county, New Jersey, as samples of the thousand that could be given:

Columbus Grange, No. 58, reporting through its Executive Committee one year's business as follows:

"Have made purchases through our co-operating fund to the amount of \$2,075.12 as follows:—153 tons of coal, costing \$752.97; timothy seed, \$55.13; clover seed, seed potatoes, \$182.25; plaster, one car load, \$105, and the balance, \$592.19, in sundries. A large amount has been purchased in Philadelphia by 'Trade Card.' (The Trade Card system explained later.)

Mount Holly Grange, No. 37, says: "By co-operation in buying grass seeds, amounting to over 100 bushels of clover and nearly the same quantity of timothy, an advantage of quality and price is realized of about 15 to 20 per cent.

Medford Grange, No. 36, reports: "Our co-operative association sold in groceries the past year \$1,641.08 and saved to the members and purchasing fund 22 per cent. (They have a store-room in their Grange Hall building which is open for business one-half day each week, a business committee of three, one going out and a new one elected every three months, being in charge.) Bought 120 tons of coal, 3 cars of bran, 65 bushels of timothy seed, at a saving of \$250.

Burlington county, N. J., farmers have made through the Grange a single purchase of clover seed to the amount of over \$7,000.

The Master of the Delaware State Grange in a report to the National Grange, said:

"Our co-operative enterprises are still working well, and have done much to place the Grange on a solid foundation. We have a State Grange Fire Insurance Company which insures only for patrons; a fruit exchange for the sale of peaches, and a plan for the purchase of fertilizers. Of the latter, we use large quantities, one year aggregating the sum of \$30,000 with one firm. This results not only in a saving on the cost, but the goods purchased being bought on contract, after asking for bids from a dozen or more manufacturers, subject to

"a certain analysis, we always have our money's worth. This plan has been followed for several years, and by making our terms for close cash, our trade has become so valuable that it is being sought for by manufacturers all over the country; consequently, we have been enabled to make very satisfactory contracts."

The Master of the State Grange of Texas, in reporting on Grange business in the State, says:

"Business co-operation continues successful where co-operative rules are not violated. Texas has 132 co-operative associations, all represented in a central organization known as 'The Texas Co-operative Association, Patrons of Husbandry.' The total capital in these 132 stores is \$629,640. The total purchases for one year amounted to \$1,612,812, with a reported saving of \$229,014."

Farmers in the Granges of Canada are doing well in business co-operation. One report says they have a wholesale supply company with branches for purchasing supplies and sale of farm products, a fire insurance company running nearly ten years, with risks amounting to about \$8,000,000 entirely satisfactory, a loan company with co-operative features, the money being procured in the cheap money markets of England on land security, and loaned at cheap rates to the members; a life insurance company for members of the Grange. To get the better of a salt monopoly, a salt company was organized and one of the largest salt "blocks" in the Province was put in operation, with the effect of breaking the ring; salt may now be had at one-third its former price.

Grange business co-operation in the purchase of farm and home supplies is also extensively carried on in a number of States, and being adopted each year by others, upon what is known as the "Trade Card" system. Each member in good standing is furnished with a card, on presentation of which at any of the "Grange Houses" (generally wholesale houses in each line of business who are under contract with the State Grange as to terms, etc.) get their goods at from 10 to 50 per cent. discount, thus enabling the small purchaser to obtain at least wholesale rates. The merchants are well satisfied at this concentrated, safe, cash business.

Grange co-operative fire insurance has grown to large proportions, and hundreds of thousands of dollars in single States are now saved each year to farmers that formerly went to swell the large dividends of stock companies, many of them being on the other side of the Atlantic, and drawing their profits from our tollers. So successfully have these companies demonstrated the savings that can be made in this direction that numerous other companies outside the Grange have been established. The Master of the New York State Grange, in his last annual report to the National Grange, said:

"In the way of co-operative fire insurance, the State of New York is carrying over \$100,000,000 at the present time, fully one half of which is confined to our Grange membership. The average cost of insuring \$1000 for each period of three years during the last nine years, has been \$3.39, including the payment of all



"losses and expenses, or \$1.13 per annum. \* \* \* Co-operative insurance has proved very successful in our State so far, and, as an aid to growth and prosperity in our Granges, its benefits cannot be over-estimated."

Here are a few items from a report submitted to the State Grange of New York on the business of sixty-one of these co-operative fire insurance companies:

"Number of policies in force, 31,143; amount of risks in force, \$61,761,715; average amount of each policy, \$1,983.16; average cost of \$1,000 for three years, \$1.84; cost of insuring \$61,761,715 three years, \$178,641.66; cost of insuring the same amount for three years in stock companies at \$8 per \$1,000, including survey and policy, \$494,093.72; difference in cost, \$380,452.72; interest on difference in cost for three years, \$68,481; total saving to policy-holders in the co-operative companies for three years, \$448,933.55."

Several Grange co-operative life insurance and aid societies are also affording their benefits at cost to Grange membership.

A number of years ago an earnest member of the Grange, one who did much early and good work in establishing several co-operative business enterprises, wrote to the writer:—"We will never be fully successful as co-operators until we get control of the money to do business with." Others have thought and felt the same way; hence Grange banks have been established in several States, and so far without a single instance of failure. Crawford and Union counties, Pennsylvania, have four co-operative Grange banks. In Olathe, Johnson county, Kansas, is another, and in this same town the members of the Granges in the county have built a \$60000 building the finest in the place, and for years have done a large business in buying farm products and furnishing every kind of farm supplies. In the same building they also, each week publish their Grange paper, *The Kansas Patron*.

In San Francisco, Cal., is located the Grangers' Bank of California; capital, \$1,000,000 of which \$800,000 was paid up in gold. It has been running seventeen years and has been worth millions of dollars to the farmers of the State, those outside as well as those in the Grange, by its great help in sustaining the price of wheat when speculators had combined to break down the price. A California paper some time ago said:

"The farmers who originated this bank had to fight against a strong combination of capitalists at San Francisco, whose profits had been chiefly derived from the grain producers of the State, but the farmers were equal to the undertaking, making a grand success of it. The great test of the usefulness of the new institution was during the time of the distressing depression in the wheat market, when capitalists were engaged in forcing the price to the lowest ebb. The manager of the bank, Mr. Montpelier, by a constant and critical investigation of the wheat market of the world, upheld the price, and guarded against disaster to the

farmers of California, by loaning them nearly \$3,000,000 to enable them to await the inevitable favorable change. The change came and the bank has been well rewarded for the guardianship it assumed. The co-operative feature of the bank has been persistently and guardedly followed by its officers, and the efficient management has placed it in the ranks of the most responsible and conservative banking institutions of the country.

Many other and varied instances could be given of successful co-operation, such as Grange stores, warehouses, creameries, grain elevators, freight lines, fruit growers and other "exchanges," large and successful schools for teaching the higher branches nearer home, libraries, and many other organized business helps. And they will grow and prosper more as time passes and the Grange and its principles become better known and still more successfully applied.

MORTIMER WHITEHEAD.

#### FOOD BEFORE SLEEP.

Some persons, though not actually sick, keep below par in strength and general tone, and I am of the opinion (says a recent writer) that fasting during the long interval between supper and breakfast, and especially the complete emptiness of the stomach during sleep, adds greatly to the amount of emaciation, sleeplessness and general weakness we so often meet.

Physiology teaches that in the body there is a perpetual disintegration of tissue, sleeping or waking; it is therefore logical to believe that the supply of nourishment should be somewhat continuous.

As bodily exercise is suspended during sleep, with wear and tear correspondingly diminished, while digestion, assimilation and nutritive activity continue as usual, the food furnished during this period adds more than is destroyed, and increased weight and improved general vigor are the result.

All beings except man are governed by natural instinct, and every being with a stomach, except man, eats before sleep. Even the human infant, guided by the same instinct, drinks frequently day and night, and if the stomach is empty for any prolonged period it cries long and loud.

Digestion requires no interval of rest, and if the amount of food during the twenty-four hours is, in quantity and quality, not beyond the physiological limit, it makes no hurtful difference to the stomach how few or how short are the intervals between eating; but it does make a vast difference in the weak and emaciated one's welfare to have a modicum of food in the stomach during the time of sleep, that, instead of being consumed by bodily action, it may, during the interval, improve the lowered system.

I am fully satisfied that were the weakly, the emaciated and the sleepless nightly to take a light lunch or meal of simple nutritious food before going to bed for a prolonged period, nine in ten of them would be thereby lifted into a better standard of health. On the contrary, persons that are too stout or plethoric should follow an opposite course.

## The American Farmer.

"O FORTUNATUS NIMIUM SV. SI BONA NORINT AGRICOLAS." Virg.

PUBLISHED ON THE 1ST AND 15TH OF EVERY MONTH,

By SAMUEL SANDS AND SON,  
At the N. W. Corner Baltimore and North Streets,  
(Sign of the Golden Plow.)  
BALTIMORE, MD.

WM. B. SANDS, Editor and Publisher.

#### SUBSCRIPTION:

\$1.00 a year, in advance. Anyone who sends a club of not less than five, will receive an extra copy FREE. To subscribers in Baltimore city, including postage, \$1.25.

#### ADVERTISING RATES:

	1 Time.	1 Mo.	2 Mo.	3 Mo.	6 Mo.	12 Mo.
1 Inch, 12 lines	\$1.25	\$2.25	\$4.00	\$5.50	\$9.00	\$15.00

Liberal reductions will be made on larger advertisements. Advertisements to remain on outside pages subject to special contract. Transient advertisements payable in advance—all others quarterly. Advertisements should reach us by the 12th and 27th of the month, to secure insertion in the succeeding issue.

At the office of THE AMERICAN FARMER are located the offices of the following organizations, each of which its proprietor, Wm. B. Sands, is Secretary:

Maryland State Immigration Society.  
Maryland State Farmers' Association.  
Maryland Horticultural Society.  
Maryland Dairymen's Association.  
Maryland State Grange, P. of H.

Entered at the Postoffice, Baltimore, Md., as Second-Class Matter.

BALTIMORE, OCTOBER 15, 1891.

#### AMERICAN AGRICULTURE.

ITS PRESENT NEEDS AND ITS GLORIOUS FUTURE.

Hon. J. M. Rusk, Secretary of Agriculture, has given to the public his views of the needs of our agriculture, and his estimate of the great, even glorious, future which awaits it. We give the following extracts:

American farmers need fuller information regarding the kinds and extent of home supplies which American agriculture, properly directed, could produce, but for which we are now dependent upon the foreign producers. When, a little more than a year ago, I called attention to the fact that American consumers paid annually to foreign countries some \$250,000,000 for products which could be, and ought to be, supplied by our own farmers, the statement was greeted on all sides with expressions of doubt, and in some cases with derision, even though I had taken pains to accompany my statement with an enumeration of the articles I referred to, and with the figures showing the extent of these importations. In a general way, it may be said that, with the exception of tea, coffee and spices, almost all the agricultural products we import could be supplied by American farmers. That this has not been done up to this time, is due to a variety of causes—amongst others, to the pioneer condition of agriculture in the States and Territories so wonderfully and rapidly settled during the past quarter of a century, and to the fact that, until recent years, the steady demand at remunerative prices for most of our ordinary staple crops

(a condition brought about by the ready sale of our surplus in foreign markets), rendered the farmers content to go on in the same lines without feeling the necessity of a wider diversification of their crops.

Our farmers need, next in order, the fullest and latest information in regard to the foreign demand for their surplus crops. If of staple crops this country produces a surplus, it will probably continue to do so for a very long period to come. For the disposal of that surplus, we must depend upon the foreign demand; and the price fixed for that surplus, even though it bear but a small proportion to the entire supply, will affect the price of the entire crop. It is only by possessing the fullest and most reliable information in regard to the foreign supply and the foreign consumption of these products, that we can judge of the amount of surplus, which, under normal conditions, we can expect to dispose of in foreign markets at a profitable rate. We must, however, do more than this. Our interest in the foreign market must not be confined merely to the profitable disposal of the surplus of our staple crops. I am satisfied that many articles could be produced in this country at a price and in quantities sufficient to supply part of the foreign demand for which we at present do not compete in any way. In many countries American agricultural products are comparatively unknown, notwithstanding the fact that a large proportion of the agricultural products therein consumed are imported and are such as could be profitably raised in this country.

It has been my earnest effort to supply the farmers of the country with accurate and reliable information regarding the supply of the agricultural products of the country and the demands of the home and foreign markets. This line of work is, however, capable of great extension. An instance of this is furnished by the efforts now being made through a representative of this department in Europe to introduce American corn in all its various preparations as an article of human diet. These efforts are now being put forth with special energy, in view of the great shortage in European cereal crops, and especially in that which forms the principle part of the farinaceous foods of a great proportion of European populations, namely, rye. No man can tell how great the demand would have been to-day for the products of our Indian corn, under the present conditions of cereal crops in Europe, had it been in the power of this Department to employ for the purposes mentioned above, during the past two years, not one, but three or four active and capable agents, or had the advantage been taken of the Exposition in Paris in 1889 to present the cause of "King Corn" to the people of Europe as it might and should have been presented.

The present year has illustrated in a striking manner what may be accomplished in the enlargement of foreign markets for American farm products as the result of the meat inspection laws which have been put in force during the past few months. Our pork industry is unquestionably capable of very great development; but, without the freedom of



foreign markets, any great extension of this industry must simply entail a depreciation in values, which will leave no profit to the producer. There is no country in the world where live stock can be raised more economically than the United States; and, in common with all the countries in the world, we must depend largely on live stock for the preservation of the fertility of our lands. For years and years to come, however, the number of animals raised in this country will provide a meat surplus; and that meat surplus must be disposed of abroad. If we can demand for it steady and profitable market, the price of all that is consumed at home will be maintained at a figure allowing reasonable profit to the producer.

As has been shown so strikingly in the results of our meat inspection law, one of the conditions essential to our finding a foreign market for the surplus of our food products, especially meats and other animal products, is purity and wholesomeness. Our competition abroad is not confined to the natural competition of goods offered for sale from other countries, but, in part, grows out of local jealousies and antagonism, which seek every opportunity to create prejudice in the minds of consumers against American products. The only way for us to fight this spirit successfully is the giving to our American products a character and guarantee of absolute purity and healthfulness.

There is no doubt that, in the matter of our dairy products, a serious injury has been done to our export trade by reason of frequent export of inferior goods and even of goods containing foreign and sometimes deleterious substances. As it is, a large part of our foreign trade in dairy products has been taken from us, and has gone to swell that of other countries. To recover our lost ground in this respect fully will be a matter of time and vigilance, but the prospects justify the effort. Even in the matter of form and size of package, we must learn what will best suit the foreign consumer. It is well understood that butter should, in all cases, be put up originally in the package in which it will be sold eventually, thus avoiding the necessity of rehandling.

Among other needs of American agriculture which I regard as urgent is a thorough and systematic inquiry into the soil, climatic and market conditions of all portions of our country, to the end that we may thoroughly understand to what special crops or particular line of agriculture each section is best adapted, and what products will, in each section, reward the farmer as being the most readily and profitably disposed of. We must understand what methods of cultivation are best adapted to the several localities, with a view to combining successful production with economy. Systematic and intelligent experiments with the several crops, and with different varieties of the same crop, combined with a close observation of the nature of the soil and of the climatic conditions favorable to their highest development, are essential to success in agriculture. I can best illustrate my meaning by an example. For instance, in the

case of cereals, it would very likely be found that certain varieties, securing the best results in the Mississippi Valley, would not meet with equal success in the Pacific or Eastern States, and vice versa. This has already been found to be the case as the result of private experiment, but nothing has been done in the direction of a thorough and systematic study of the adaptation of special varieties of our leading cereals to different localities. The fact that the Weather Bureau is now an integral part of the Department of Agriculture would necessarily bring it into line as an active and valuable factor in such an inquiry. Experiments of a similar character in which all peculiarities of soil and climate must be carefully noted are urgently needed in the case of the various fibres, notably hemp and flax.

The suggestion of such a thorough and systematic inquiry indicates another need of American agriculture which is of the first importance, namely, a co-operation, for this and other purposes relating to practical agriculture, of all the educational forces at present engaged in this line of work. We have in this country, aside from the National Department, a State Board of Commissioner of Agriculture in every State in the Union. [Maryland unfortunately, seems the only exception to the Secretary's broad statement.—Ed.] In each State we find a college, drawing a liberal annual income from the National Treasury in addition to the generous endowment originally bestowed upon it under the act of 1862; and alongside of each college, an experiment station to which is allotted from the National Treasury an annual income of \$15,000. In addition to these State boards and colleges and stations, we have, in many States, farmers' institutes, organized under the State law and drawing an income from the State Treasury. Then we have National and State and county organizations of a voluntary character, devoted to horticulture, dairying, stock-breeding, etc. All these should be brought into line with some well-conceived plan for systematic co-operative work in behalf of practical agriculture. At present the only attempt at anything of the kind is represented by the unquestionably feeble link which connects the Department of Agriculture with the stations, by the voluntary organization, undertaken by the college and station workers themselves, which meets yearly in some part of the country for counsel and co-operation. A thorough and hearty co-operation between these various bodies and their representatives in the collection of data relating to the various crops raised in different sections of the country, accompanied with reliable observations on the soils and climate of the various localities, would supply a vast amount of valuable information, the practical deductions from which could be, through the same agencies, promptly and widely distributed to those who are to be benefited.

Other conditions, urgently needed for the full fruition of my anticipations as to the future of American agriculture undoubtedly exist,

many of which must necessarily depend somewhat upon the natural growth of the country and the various changes, especially in regard to questions of labor and capital, which such a growth must inevitably bring about. For instance, relatively to the profits of agriculture, farm labor is far more costly than in many other industries. The remedy in this particular however, cannot be forced, and must await, necessarily, the change in conditions which will attend the general progress of the country. \* \* \*

The realization of the needs which I have already indicated, and the march of time which will bring with it the changed conditions I have spoken of, seem of themselves to indicate a wonderful and varied scope in the future of American agriculture. When the time shall come that no agricultural product which can be produced in the United States shall be purchased abroad; when the fullest and latest information is available to all classes of farmers in this country as to the crops of which a surplus can be readily marketed abroad, and as to the extent of the demand for such surplus; when every section of the country is devoted to raising that which it can raise best and cheapest, and which commands a ready and profitable sale; when wise legislation has reduced the burdens of the farmers to a minimum, and has at the same time enlarged his opportunities; when diplomatic zeal shall have been exercised to smooth the way for the sale of our agricultural products in foreign countries with as much earnestness as has heretofore been shown for our manufacturing, mercantile and financial interests; our relations, in this respect especially, have been extended to the fullest limit, not only with the countries of Europe, but with those of tropical America, and even of Asia—I am quite sure that the scope of American agriculture will far transcend any limits which my feeble pen can depict. No doubt, I indulge, and have often indulged, in rose-colored anticipations with regard to the future of agriculture in this great agricultural country, favored as it is in different parts of its vast realm with soil and climate suitable to the production of almost everything essential to the necessities and comforts of man; and yet I persist in believing that however rose-colored my anticipations are they will still fall short of what the realization, even a quarter of a century hence will be. It is from such convictions as these that I am led to call the attention of our American to agriculture as one of the industries most worthy of their attention in considering their future career. I say unhesitatingly that the young men of our country who will bring to agriculture the education and intelligence, the industry and perseverance essential to success in every career, whether mercantile, industrial or professional, will, in the course of the next 20 years attain a far greater degree of material well-being on the average that awaits them in any other calling. I believe that twenty years from now, the now almost universal desire of youth resident in the country to abandon it for the

city will be reversed, and that numbers of those brought up in the city will look forward to life in the country as the most desirable, uniting the prospect of ample competence with independence, health and enjoyment.

## HOME DEPARTMENT.

The What-To-Do Club.

THE 1st of October was moving-day in Augusta. In June or July one is expected to decide where they will locate the next year, furnish endorsed notes and move in October. At the North, May 1st is moving-day, and I remember my childish curiosity and pleasure at the sight of the household goods. I always entered into the spirit of it and wished I might help. First of May was house-cleaning time, too; we had no dread of it, for our mother was an admirable manager, taking the rooms at the top of the house first, cleaning and putting to rights before the other parts of the house were disturbed. We always felt pleased and happy when all was completed, for there was a brightening of old things and new ones added. Our dear mother was never fretful at these times, but seemed to think it her duty to be brighter and more cheerful to make up for the small discomforts consequent on these changes. Oh, happy days, never to return; your memory is tender and sweet as that of the dead angel mother's. As far as permissible, I keep to the good old days, proud to say, "This is my mother's way."

There are differences here, climatically so, and we are obliged to conform to them. I try always to let the same spirit of neatness prevail; it is a personality. At first I felt offended at the oft-repeated remark, "How clean everything is;" now I know I am just a little different from other folks, and I am justly proud of this little deviation within and without. "Why, she has the middle of the road raked," they say. I inwardly reply, "Yes, it was so in the good old days," and it is better than defacing trash piles. I have labored long and earnestly in their midst; they admire the neatness, but have not the courage to help execute themselves, trusting to unreliable negroes—and that means filth. The people of the South would be a new race entirely if they would listen and learn; they are wedded to their idols gastronomically; the frying-pan and coffee-pot have full sway. Sometime since there appeared an article in the *Augusta Herald* on the non-use of meat; the spirit moved me to give them a few thoughts in reply, and since then I am invited to take a corner in "Hygiene;" it seems like an answer to prayer. How eager and happy I am. What shall the harvest be? Shall I reach many souls? God give me the grace and courage!

There is scarcely a month in the year in this part of the South where meat is a necessity, and if it were so, good, healthy-raised poultry would be better than disease-producing pork and beef. If they would subsist mainly on grains, fruits and vegetables, they would soon be reconstructed. One disadvantage exists;



fruit is very seldom within the reach of the poor; to tell them to eat plenty of fruit, that it will cleanse their inflamed blood, is a barrier that only your own resources can remove. There is a great work here; the laborers few in comparison. If we seek to be happy and make others happy, the first and most common condition is expressed in the one word *health*. Not simply physical health, but health of body, mind and soul; right relations between the different parts of our own being and our social surroundings. The consciousness of physical vigor is a constant joy; the simple use of any faculty carries with it a sense of delight if there be health in that faculty. The one grand condition that lies at the foundation of life's pleasures, is represented in this one word *health*.

Through ignorance or carelessness, many have too little control over the matter of health; they are not able to command the question as to whether they will be well or not. The day-star is dawning; hygiene and sanitary subjects are in order. The world will sometime come to it, when it will be able to be well at will. Dear Master, hasten the time!

If I may be pardoned for digressing, may I urge on all members of the Home Club to let us hear from them on items of home interest; if your good "Ceres" is silent because of sorrow, will you not show her your appreciation and sympathy in additional efforts; it is not well to hide your light; the world is better always for good advice.

The winning of souls  
Is the boon I lingering ask.  
To have no bar 'twixt my soul and Thee,  
My thought to echo Thy will divine,  
Myself Thy servant for any task.  
Life! Life, I may enter through Thee, the door,  
Saved, sheltered for evermore.

A STRANGER.

Sand Hills, Augusta, Ga.

## HOURS OF EASE.

### BIRTHDAYS.

There is great significance in this simple word, vitally so, often. Noble men and women have made the world better for their birth. I have heard many poor souls curse the day of their birth and wish it had never been, while I felt the day of their death would better for them I refrained from giving it expression; a great tenderness and sadness mingled with divine pity filled my soul. I knew there were causes for their degradation, almost beyond their control—prenatal, perhaps, or faults of diet in infancy that had subjected them to the control and sway of evil—or some of the ought notes of life they find so pleasant, and no note of warning had reached them or no tender soul had reached their ignorance and so the wages of sin brought death, or a desire for it that they might forget their sorrow.

It is a beautiful and wise custom to remember birthday anniversaries. We may not be able to make elaborate preparations or purchase costly gifts, but with a heart full of tenderness we can make these returnal days long to be remembered; happy, blissful days.

On the young these tokens of remembrance leave that impress long after the giver has departed, and as

each anniversary returns they think lovingly of those who had ministered to them, and the prayer that accompanied the "best wishes" meets its fruition in new resolves that the future shall be brighter and better.

Two little tots once decided to play at "birthday party;" dollies were to be guests; they had decorated with flowers, made all necessary arrangements in the furniture when suddenly one of them remembered they had no ice cream as Grandma had on her birthday; they talked over resources and concluded there was but one way to get it and that was to pray for it; Grandma prayed on her birthday "that all the good things people wished for her might come." So the oldest prayed "Dear Lord please to give us ice cream for the birthday."

Mamma and Auntie were in the next room; tears filled their eyes and they determined to let their faith have full fruition. Auntie went softly to a neighboring store and brought in a nice dish of cream. They were enjoying it and saying how "good God was" when they thought of not having any cake like Grandma to eat with the cream. They prayed fervently for cake, and in the same manner it was furnished them. After doing full justice to all they concluded that since God was so good they would pray for new dollies, toys, and doll's furniture. Mamma and Auntie decided it was most too much of a good thing and did not furnish the latter requests. They did not leave faith but decided that "God was too busy with the other little girls to send them all they prayed for." Grandma has passed to life eternal and they have grown to womanhood. Her memory is sweet to them and her prayers for them have been answered; their faith in the Dear Master has never wavered; to one has been given the gift of a glorious voice, reaching many souls in its tender pathos. August 28th was my birthday. A stranger in a strange land, far from the old home and dear familiar faces, memory went back to the old days when dear ones made these returns so happy, and in dwelling on them I forget my loveliness and the sorrows that so often oppress me. I made new resolves for the future, and prayed most fervently that I might be found more worthy the mantle that had fallen on me that I might reach other souls as they labored for mine, and that, when life's anniversaries were over, we with the poor souls we had ransomed might find rest forever at the Master's feet.

"Life's but a strife, 'tis a bubble, 'tis a dream,  
And man is but a little boat  
That paddles down the stream.  
Pleasure is the waterman that rows the boat along  
The passengers are smiling Joy,  
While sorrow sits beside."

A STRANGER.

Sand Hills, Augusta, Ga.

### FALLING IN LOVE.

There is no power so universal and so overpowering as the one which, in common currency, we call falling in love. Since it is an exaltation, just why it is that the person experiencing it falls, it might be hard to determine scientifically. But so

the world chooses to express itself, and we need not dispute over a term or an epithet. When Emerson said, "All the world loves a lover," some one replied that it was not true; for no company is so little social, so uninteresting, if not particularly dreary, as the lover when the reciprocal party is present. But it was not the deportment of two lovers that Emerson had in mind, but the intentions and passions of one. With this attitude and feeling, whether it be in real life or in a novel, who does not keenly sympathize?

In the novel, how rapidly and eagerly we turn the leaves over to find some obstacle or complication of obstacles removed and the hero triumphant at the end. If the story ends badly or adversely, though it may still represent the Fates as they sometimes dispose themselves, we are apt to shut the book or throw down the paper containing it with disgust, if not with asperity. And in real life, where our own interests are not traversed, our sympathies are not different. Even the elopers, if they are not too very young, we wish to see escape from their hard-hearted pursuer; and we read the newspaper dispatch with gratified complacency, which tells us that in the aisle of the railway car or over the boundary of a State some minister or magistrate has tied the indissoluble knot.

"The Maker," says Thackeray, "has linked together the whole race of man with this chain of love." It begins to be wound about us in youth, but, as Steadman prettily intimates in his poem of "*Toujours Amour*," it is never loosened while life lasts. In the future, presently or retrospectively—in one way or the other—from our early teens onward, it is the perennial, overwhelming passion. It is the "happiest time of youth and life when love is first spoken and returned; when the dearest eyes are daily shining welcome, and the fondest lips never tire of whispering their sweet secrets; \* \* \* when doubt seems coward—i. e., misfortune impossibility, honesty only a sweet trial of constancy!"

"Fidelity in love," says Thackeray further, "is a state of mind that men fall into. We love being in love, that's the truth on't. If we had not met Joan we should have met Kate, and adored her." Not for beauty alone, or for wisdom, or for wit do men love. When we analyze our passion, it is found, usually, to be a complex of many cards. "We might as well demand that a lady should be the tallest woman in the world, like the Shropshire giantess, as that she should be a paragon in any other character before we began to love her," as to insist on any other sole charm. Perhaps the greatest stimulant to love, after all, is proximity to the one who is favored. If we love at all, it must be somebody; and, if Fate had not thrown the favored one in our way, it would have been somebody else.

The mental ecstasy which we call love defies all analysis. It cannot be metaphysically explained. "What the essential difference between man and woman is that they should be thus attracted to one another," says Thoreau, "no one has satisfactorily answered." Mentally it has been said to be wisdom on the one side and love on the other. But a French

cynic says, "There are two parties to a love transaction: The one who loves and the other (whether man or woman), who condescends to be so treated."

However much sociological doctors may differ in their diagnosis of symptoms, one thing breeds no dispute. And that is, the transforming character of the malady, if a malady it be. To fall in love is to ascend—paradoxical as it may seem—into a new world. The subject himself does not know just what it is that has happened, but he knows that no common change has come. He walks as it were upon rainbows, and the dingy earth takes an opalescent hue. If it is a first experience he cannot be convinced that his feeling will ever change, that it will not be eternal.

Who does not remember what a new charm befel the landscape when he first loved, and how particularly centred it was on the farm or cottage which was the home of the beloved object of his passion? Even the rails upon the fence in a remote lot seem, somehow, different from those contiguous to it, and a sliver from the hen-coop he could have worn as a charm, since it rested so near that particular house. Not a member of the family, from the homely old grandmother down to the little barbarian of a brother, and the cross cur dog that belonged thereto, escaped this remarkable and unexplainable transfiguration. Surely Dryden ought to have said, not "great wits," but

The lover is to "madness near allied,  
And thin partitions do their bounds divide."

If these observations come close to levity, far be it from me to treat the topic in such a spirit. Who, in fact, can? For though some of us may have had immunity from the chicken-pox and the measles, and the whole school of infections that most people are supposed to have at least once, no one escapes being in love. Its universality and frequency, as well as its sacredness, are its perpetual and unanswerable vindication and defence.

It is said there is a difference, however, in man's relation to love and woman's. With him the ecstasy is an episode merely, with her it is the business of a life. As the poet aptly expresses it:

Man's love is of man's life a thing apart,  
'Tis woman's whole existence.

Walter Savage Landon says that with love it is as it is with philosophy, "the more we have of it and the less we say about it, the better. \* \* \* There is a gloom in deep love as in deep water; there is a silence in it which suspends the foot, and the folded arms and the dejected head are the images it reflects. No voice shakes its surface; the muses themselves approach it with a tardy and a timid step, and with a low and tremulous and melancholy song."

But though love itself endures, its high tide and tumultuous storm are for a season only. The noisy brook which careers with vocal joy down the mountain becomes in the meadow beyond the deep and tranquil stream.

"Alas, how soon the hours are over,  
Counted us out to play the lover."

But they are precious hours none the less. He who is in love has given a hostage to virtue. The ideal of



perfection he longs for, and sees embodied, he wishes in some way to become or be equal to. It is a salvation that embraces the individual, and spiritualizes and preserves the race. It would be a sad day if it could be extirpated or go out of fashion.—*Joel Benton, in Drake's Magazine.*

#### WHEN THERE ARE GUESTS IN THE HOUSE.

There are guests in the house. You have longed for their coming, and now they are here you feel that both you and they can be perfectly happy. And yet, if you but stopped to think of it, your duty is by no means fulfilled towards your visitors when you have ushered them into the spare-room, and have told them at what hour you breakfast.

And that spare-room—is it heated? If it isn't, have you put a sufficiency of clothing on the bed? I was once a visitor at a place where I was expected to sleep in the middle of winter, under nothing beyond a sheet and a counterpane. If I hadn't known of an old physician's recipe for keeping the feet warm in a cold bed, I should certainly have sat up all night. This simple remedy is the putting of an extra pillow under the sheet, on that part of the mattress where the feet will come. It is infallible, and worth remembering. But as all the guests have not such ideas at call, be sure that there are plenty of extra coverlids in the guest-room. See that the window-curtains are practicable, and that your guest knows how to manage them. Nothing is so unpleasant to a visitor as to be compelled to pin articles of clothing to the window-frames because the shades won't come down, or to experiment with noisily-working curtain-fixtures at twelve o'clock, the night after the party. Be sure there are the following articles in the room, however small; some good soap, a large jug of fresh water, a clean glass for drinking water, a supply of towels both fine and coarse, to suit all tastes. On the toilet-table place a hand-glass, a pair of small scissors for cleaning nails, clipping bangs, etc.; a bunch of wooden toothpicks, so that your guest can make use of these necessary articles without offending your taste at the table. Be sure the pin-cushions is well supplied with pins, and that there is an easy, soft-cushioned rocking-chair in the room. Supply the bed with plenty of pillows. If any one does not use many they are easily removed, and some people cannot sleep unless well bolstered up. In the room place a bottle of black ink, some notepaper and envelopes, a mrdium-sized new steel pen in a holder, two or three stamps, and a postal card or so. But, you, say, why should I supply my guests with postage and stationery? Your guests, I am sure, will always see when they leave the stock of stamps and paper is by no means diminished and; how convenient the handy supply will be to your visitor when, on the morning of her arrival, she wants to drop a line to the folks at home, and has not yet learned the way to the local post-office. Also place in the guests-chamber a few entertaining novels; one may serve to while away a sleep-

less hour in the night or early morning to your nervous guest. Without in any way toading to your visitors, you should do all you can to prevent homesickness on their part. Homesickness is caused in a great measure by people expecting guests to do all sorts of things that are distasteful to them. Until you learn the taste of your visitor, never serve any *risque* food—such as tripe, liver, fish, brown bread, or salad, without preparing a second dish of food known to be liked by your guest. Nothing will make any one so tired of a visit as being expected to eat the particular kind of food that it always gives one the nightmare to think of, and of having to eat it or go hungry. If you bluntly inquire of your guest, "Do you like tripe?" of course, she will feel too polite to say no. But if at the table you inquire, "Do you take tripe or steak?" she can easily avoid putting herself in purgatory by choosing steak and avoiding tripe. In serving stranger guests it is well to remember that beefsteak, roast beef, veal, lamb, eggs, wheat bread, tea, coffee, apple pie, and sponge-cake can be eaten by nearly every one; while to many such viands as ham, pork, mutton, graham bread, chocolate, cocoa, custard or cranberry pie, and chocolate cake are entirely distasteful.

Don't insist on tagging your friend around all the time. Don't make her room yours; and if she wants to take a solitary walk, don't bore her with curious questions as to where she went, and why she went there, on her return. If she is used to a quiet life, do not insist upon taking her somewhere every hour of the day, or she will go home utterly worn out in body and mind. If she is invited out, be kind enough to tell her what sort of dress is most appropriate. Otherwise—not knowing local customs—she will be in a quandry as to whether her sober black silk or her giddy poppy surah be the proper thing. When she comes to go, if possible, accompany her to the station; assist her in getting her baggage checked, see that she takes the right train, and she will go off with a smiling face, an easy mind, and a grateful heart. If you follow these directions you will truly "welcome the coming and speed the parting guest."—*The Home-Maker.*

#### HINTS AND HELPS.

##### NOTHING.

**PICKLES.**—Put layer of grape leaves in stone jar, then anything for mixed pickle, beans, radish pods, cabbage, onions, small tomatoes, etc. Sprinkle salt to cover each layer, and place grape leaves between. Fill up with rain water and place a layer of sour cherry leaves on top. In a month the brine will be good vinegar.

**RAT TRAP.**—Use a soap box having a hinged top to it; bore two small holes in ends, place pan of meal, etc., in this, let rats eat all they can for a week, then poison the food. Keep lid buttoned down tight.

**KEEP** a roll of thin white goods saved from dresses, etc., for butter cloths.

**SAND PAPER.**—Keep pieces of tough brown paper and stick fine

sand on. Use in small strips for manicuring hands.

**SMOTHERED BEETS.**—Take boiled beets, cut in dice, cover with gravy and bread crumbs; bake.

**PUT** rusty nail among roots of flowers before planting.

**SOAK** cucumber peel in water or sour milk, the juice is used for whitening and smoothing complexion.

**CHOPPER.**—A tin can with stiff edges makes a good chopper.

**GRATER.**—Straighten out a can, punch holes in close together.

A GREAT improvement to blackberries or solid fruits, is to make them juicy by adding cold water after they are sugared. This makes juice and softens them.

**FLAVORING.**—Save rose geranium leaves for flavoring.

**POLISH.**—Rub scratched furniture with walnut or hickory nut kernels.

**PICKLES.**—Put layers of grape leaves, cherry leaves, red peppers, in your pickle jar. These make vinegar. MRS. H.

**DRIED BEANS.**—Boil green beans when pods are tender. String and dry in sun or oven. S. D.

Some reader please send recipe for stain from hickory and walnut.

To the housekeeper who prides herself on her golden pumpkin pies, I would say that if she will beat the whites of the eggs to a stiff froth and add them to the other ingredients the last thing, she will find herself well repaid for the extra trouble. Squash for all culinary purposes is much superior to the pumpkin, being finer grained, dry sweet, and richer flavored. Those who cannot eat pie crust made of flour, a palatable and easily digested crust for pumpkin pies can be made of corn meal, by dotting a pie plate over with little bits of butter, then sprinkle a layer of meal over the plate, pour on the pumpkin and bake. LOUISA FUNSTON.

#### FOR MOTHERS.

##### LET CHILDREN EARN MONEY.

There is a strong flavor of common sense and sound judgement in the following suggestions, which we find in the *Manufacturers' Gazette*: Young people of both sexes should early be taught the use of money, and to rightly know its value they should be given ways of earning it, to spend, within reasonable limits, as they chose. Much of the work which even little children do in the shape of chores around the house, might well be paid for, as perhaps a better way of getting money into a child's hand than any other. It is very demoralizing to beg, and the child that is encouraged or even allowed to get its spending money in this way, is surely laying up a poor foundation, for earning money should as much as possible be based on farm operations. When the boys see in their own pockets some of the money made by farming, they will take more interest in their daily work. Unless parents who are farmers desire to discourage their sons from following this business, they should be allowed to do something each year on their own account, and have the money they thus make. The little thus earned early by them-

selves will be worth a hundred times as much as if left to them after the death of their parents, who previously kept them ignorant of any practical knowledge of the value and uses of money.

#### OUR BOYS AND GIRLS.

##### A DOG STORY.

You have, no doubt, read many stories, and true ones, indicating the wonderful sagacity of canines, particularly among certain breeds. What boy or girl has not listened to the fascinating tales of the rescue of benighted travelers in the drifted snows of the Alps by the heroic exertions of the noble St. Bernard dogs, led by that mysterious faculty which we usually call instinct? Though I confess that to me, this instinct seems almost akin to reason. And in picture and story and song how often we have seen delineated this same peculiarity which induces the Newfoundland dogs, and those of other breeds to plunge fearlessly into the water to the rescue of those in danger of drowninn.

Even the cold and haughty Lord Byron had a warm place in his heart for

The poor dog, in life the firmest friend,  
The first to welcome, and defend,

and dedicated a touching and beautiful epitaph to the memory of his favorite Newfoundland dog.

But an incident recently came to my knowledge which indicates that a dog's helpful nature extends beyond the range of the human family.

Stillwater is located on the shore of Lake St. Croix, a body of water twenty-five miles long, with an average width of half a mile. On one of the sunny days of Spring, about the 20th of March, while the ice still covered the lake, two dogs were disporting on the smooth surface one of them an English setter, the other a common, everyday sort of a dog, of a dingy black, without pedigree, record or value. By reason of the near presence of small springs along the shore, the ice in many place was thin and treacherous, and there were several spots entirely denuded of ice. In one of their mad whirls the black dog slid into the water, at a point where "deep sea soundings" would indicate a depth of nearly fifteen feet.

Like all dogs, this little black fellow was a swimmer, and he immediately struck out boldly for the shore or, rather, for the adjacent ice.

As he reached the ragged edge he raised his fore paws and clung to the solid ice, but could find no rest for the soles of his feet, that is, the soles of his hind feet, which beat the water in a vain attempt to secure a hold upon anything tangible by which he might propel himself on to safe footing.

The setter dog was not an idle spectator of the frantic struggles of his little friend. There happened to be a great pine log frozen in the ice, with a portion of its surface exposed, lying within less than a foot of the open water in which his black companion was battling for his life. The setter seemed instinctively to comprehend the fact that this log was his proper base of operations, as presenting a surface to



which he could fasten himself with ease and safety. This he proceeded to do, and bracing himself firmly on the log, he reached down, and fixing his teeth securely in the loose skin on the little fellow's neck, landed him safely on the solid ice. In a few moments, or after the rescued canine had shaken himself pretty nearly dry, their sportive gambols were resumed.

The men working near there have noticed, however, that the black dog, the common one, retains a lively recollection of his adventure in the chilly water, and since that day has not been seen disporting on the treacherous ice.

I have never heard nor read of an instance like this before; but it is easy to understand that if a dog's instinct leads him to go to the rescue of a human being perishing in the water, that the same propensity would incite him to rush to the rescue of one of his four-footed friends when danger and death seemed inevitable.

A. B. EASTON.

#### HOW TO CUT A STRONG THREAD INSIDE OF A BOTTLE.

Hand to one of your friend an empty bottle closed with a cork. You will already have placed a crooked pin in the cork to which is attached a thread—a button at the end of the thread will serve to hold it stretched. You will propose to cut the thread without touching either the bottle or the thread, and to make assurance doubly sure, you will seal the cork with wax. Leave the room with the bottle, and return in a moment to present the bottle to your audience, the thread cut in twain, the lower end of it with the button lying at the bottom of the bottle. This amusing trick is done by the sun's rays through a burning glass. A clear glass bottle should be used in preference to a black one.

—Once a Week.

#### HINTS ON WINTER FEEDING.

Calves need the best attention, especially in winter. The growth they have attained during the summer must not be allowed to stop, nor must they be permitted to become poor now.

When so much has been said in the agricultural papers about the proper balancing of rations, no dairyman is excusable for using costly foods, like oatmeal, etc., when bran, shorts, linseed and cotton-seed meal can be made to serve as well at less expense.

For a cheap bedding use straw, bog hay, leaves, dry peat, muck and gypsum. Gypsum (plaster) and kieserite, a German mineral salt, are also good. These are all rich in plant food, and in a litter, the absorbing power and plant food should always be taken into account. Many use short cut straw, as this will absorb 1½ times its own weight of liquid, thus making a valuable fertilizer by itself. Dry muck is also good, and so are nearly all dry plant remains.

Don't starve a cow because she is dry. Now is the time for her to increase in flesh so that she can give plenty of milk when she comes in. It is poor economy to give dry cows poor hay or even straw and the loss

will show itself in the milk pail. It is not best to feed as much grain as to cows in milk because of the danger of milk fever, but 3 or 4 qts. a day will not hurt them.

Our best dairy farmers keep Holsteins and Jerseys and their grades. They feed clover hay, corn and corn fodder, bran, oil meal and chopped oats in the order named. Dairying has not been divided into summer and winter dairying. We take it when it comes.

#### BRIEF NEWS SUMMARY.

**FOREIGN.**—Karl I, King of Wurttemberg, died—The discussion as to whether the Pope should leave Rome and hold the next papal conclave abroad was reopened—William Henry Smith, Conservative leader in the House of Commons, died—Charles Stewart Parnell died, his death causing a profound sensation in Europe—Sir John Pope Hennessy, M. P., died—It is estimated that 32,000,000 Russian peasants are destitute—Reports were received of rioting in Rio Janeiro—A gale swept over parts of Great Britain last Tuesday, causing great damage. Public parks were devastated by the wind, buildings injured and shipping placed in great danger. In Scotland railroad trains were stopped by high water on the tracks—The State Department denies the report from Shanghai that the foreign ministers have closed negotiations with the Chinese government.

**GENERAL.**—It is expected that the Nez Perce reservation, the richest in the Cherokee strip, will soon be opened to settlement—The ecumenical Methodist council met in Washington—Mrs. Grover Cleveland has given birth to a girl baby, and it was named "Ruth"—The U. S. S. Dispatch was totally wrecked off Assateague Island—A great storm prevailed on the Atlantic coast—The B. & O. R. R. Company is preparing to assume control of the Ohio and Mississippi Railroad—The B. & O. fast mail No. 8, from Chicago for New York, jumped the track at Hicksville. Two passengers were killed and several others injured, two seriously—The contest over the will of Mrs. Hopkins-Searls is ended, and Timothy Hopkins, the disinherited adopted son, will get between eight and ten millions of the property.

**MARYLAND.**—New shelled corn was received in Baltimore from Dorchester county Oct. 8—Ex-Treasurer Morgan, of Baltimore county, is reported short \$25,000 in his accounts—A New York Company, with a capital of \$1,000,000, have purchased the rolling mill at Principio, Cecil county—Cumberland had a grand carnival, and was crowded with visitors. At night fireworks were set off from the hills on the W. Va. side of the river—Eleventh "A," of the B. & O. R. R., at Locust Point, Baltimore, was completely destroyed by fire, with all of its machinery and 135,000 bushels of wheat—A passenger train on the Baltimore and Ohio Railroad, delayed by the fire at Locust Point made the run of 92 miles on the Philadelphia division in 92 minutes—Lewis A. Hildebrand, of Buckeystown, Fred. Co., realized from 95 acres, 2,465 bushels of wheat, an average of 37 bushels to the acre. The wheat

weighed 65 pounds to the bushel—A Western Maryland accommodation train, which arrives in Baltimore at 2 40 P. M., ran into a gang of ten workmen in the tunnel between Fulton and Pennsylvania Aves., killing two men and injuring four others, one fatally—The new court house of Montgomery county has just been completed at Rockville—Baltimore city Democrats nominated the following ticket: For Mayor, Ferdinand C. LaTrobe; for Clerk of the Court of Common Pleas, John T. Gray; for Clerk of the Criminal Court, Hiram G. Dudley; for Clerk of the Circuit Court, Alvin Robertson; for Register of Wills, Thomas W. Morse; for Sheriff, Isaac S. Sanner; for State's Attorney, Charles G. Kerr; for City Surveyor, Augustus Bouldin—The Mary Thomas Memorial Building of the Womans' Christian Temperance Union, on South Gay street, was dedicated—Independent Democrats of Baltimore nominated S. Davies Warfield for Mayor; William L. Marbury for State's Attorney; John S. Bullock for Clerk of the Criminal Court, and Robert T. Banks for Register of Wills.

#### BALTIMORE MARKETS—Oct. 15

**Flour.**—Steady. We quote Western Family \$4 50; City Mills Super \$4 50; do. Family \$3 50.

**Wheat.**—Southern active. Fultz selling at 1 00a1 08; longberry at 1 02a1 08. Western dull, with No. 2 red spot selling at 1 01a1 04½; December 1 07½.

**Corn.**—Southern steady, white selling at 70a 72 cts., yellow at 71a72 cts. Western dull at 68 cts. for mixed spot, and 6½ cts. for the year.

**Oats.**—Quiet. We quote ungraded Southern and Pennsylvania 32a36, ungraded Western mixed 32a34, do. do. White 34a36½, No. 2 mixed 32a34.

**Rye.**—Firm. We quote prime 90a95½, fair to good, 85a90, common 70a85 cts.

**Hay and Straw.**—Steady. Choice timothy 15 00; good to prime 14 00a14 50; fair to good 13 00a13 50; common and inferior 9 00a10 00. Clover 10 00a11 00. Off grades 8 50a9 50a on track. Prairie Hay 11 00a12 00. Straw Rye in carloads 12 50a13 00 for large bales in sheaves, blocks 8 00a9 00; Wheat blocks 6 00a7 50, and oat blocks 7 00a8 00 per ton. Short chaffy Wheat and oat about \$1 lower. At scales—Hay—Timothy 12 00a15 00, Clover Hay 10 00a12 00 per ton. Straw—Wheat \$8 00, Rye 10 00a11 00, Oat \$9 00 per ton. Ear Corn 3 50a4 00 per bbl.

**Mill Feed.**—Firm. quotations were: Western bran, light, 12a13 lbs., 17 50a18 50; do. medium, 14a16 lbs., 16 50a17 50; heavy, over 16 lbs., 15 50a16 50; and Middlings, 15 00a16 00, with spring brand ranging \$1 per ton under these figures, all on track. City Mills Middlings \$19 per ton delivered.

**Seeds.**—Quotations. Choice new Cloverseed 7½a7¾ cts., prime 7a7¼ cts., No. 2 nearby 6¾a7 cts. per lb. Timothy seed prime 1 25a1 35, fair 1 10a1 20 per bushel. Orchard grass nearby, \$1 00 per bushel; choice Western 1 30a1 35.

**Provisions.**—Quiet at quotations: Sugar-pickled Shoulders 7½ cts.; smoked sugar-cured Shoulders 8½ cts.; sugar-cured Breasts 11 cts.; canvassed and uncavassed Hams, small averages, 12 cts., large averages, 11½ cts., per lb. Mess pork, \$12 00, and do. new \$13 50 per bbl. Lard best refined, pure, 8½ cts. per lb.

**Butter.**—Demand active and firm at quotations. Fancy creamery jobbing at 28 cts., good to choice creamery 25a26 cts. per lb. Imitation creamery 18a19 cts. per lb. Fancy ladle-packed 18a17 cts., prime to choice do. 14a15 cts. per lb. Store-packed 14a15 cts., and creamery prints 27a28 cts. per lb.

**Cheese.**—Firm. Fancy full cream, New York State, 50 to 60 lbs., 10½a10½ cts.; choice full cream 10½a10½ cts.; New York flats, 30 to 35 lbs., size, 10½a11 cts., per lb.; 20 lbs. size 11a11½ cts. per lb.

**Eggs.**—Strong at 25 cts. per dozen, for fresh.

**Poultry.**—Quotations were as follows: Spring chickens 12a13 cts. per lb.; old Hens 11a12 cts. per lb., and old Roosters 25a30 cts. apiece. Ducks 11 cts. per lb. Turkeys 14 cts. per lb. Pheasants sold at 75a80 cents apiece.

**Tobacco.**—Maryland.—Receipts continue to decrease; demand active at full prices. We quote: Inferior and frosted 100a1150; second common 2 00a3 00; good do. 4 00a5 00; middling 6 00a8 00; good to fine red 9 00a11 00; fancy 12a13; upper country 3a50; ground leaves 1a50.

**Wool.**—We quote: Unwashed extra choice and light 23a24c; average lots 21a23; do. merino 16a18, tub-washed, fair to choice, 30a33; pulled 25a28. Burry wool from 2a10 less per lb., according to quantity of burrs. All black 3 to 5 cts. per lb. less.

25 Silk Fringe Envelope etc. Cards with  
PATENT FREE. CAPITAL CARD CO., COLUMBIA, MD.

## FOR SALE, THE AMERICAN FARMER.

The subscriber, having other interests which require his attention, will dispose of  
**THE AMERICAN FARMER,**  
ITS TITLE, GOOD-WILL, SUBSCRIPTION LIST,  
BOOK ACCOUNTS, ETC.

The long existence of the publication, its reputation as a useful, dignified and unpurchasable farmers' paper, the high character and intelligence of its constituency of subscribers, make this a rare chance for a person of suitable attainments and experience to engage in a pleasant business, and one which, in view of the general and manifest improvement of the material condition of the agricultural class, may be made, with proper exertion and attention, a profitable one. For particulars, terms, etc., address,

**Wm. B. Sands,**

Cor. Baltimore and North Streets,  
BALTIMORE.

## MUSIC

#### Sabbath Day Music.

A superb book, full sheet size, heavy paper, engraved plates. Very comprehensive. 39 pieces for piano and organ.

#### Choice Sacred Solos.

39 songs for Soprano, Mezzo Soprano and Tenor.

#### Choice Sacred Solos for Low Voices.

40 songs for Contralto, Baritone and Bass.

#### Choice Sacred Duets.

50 beautiful duets by standard authors.

#### Song Classics, Vols. 1 and 2.

Two volumes, each with about 40 classical songs, of acknowledged reputation.

#### Piano Classics, Vols. 1 and 2.

Two 1 rge volumes, full music size, containing 44 and 31 pieces respectively. Only the best composers are represented.

#### Young People's Classics, Vols. 1 and 2.

Each volume contains about 50 pieces of easy but effective music.

Any volume, postpaid, in paper \$1; boards \$1.25; cloth gilt \$2.

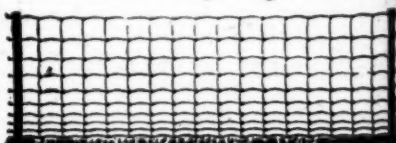
#### Oliver Ditson Company, Boston

NEW YORK:  
C. H. Ditson & Co.

PHILA.:  
J. E. Ditson & Co.

75 Fancy transparent cards etc. and our agents  
have bound sample book all for sale, please  
address, Star Importing Co., Enfield, Ohio.

#### The Coiled Spring Fence.



Does not burn up.

Does not blow down.

Does not bank snow.

Does not injure stock.

The only master of expansion and contraction. Write for circulars and mention this paper, to

PAGE WOVEN WIRE FENCE CO.  
Adrian, Mich.

#### R. VINCENT, Jr. & SON,

Wholesale and Retail

#### Florist, Rose Grower

AND

#### SEEDSMAN,

COWENTON STATION, B. & O. R. R.

White Marsh P. O., Baltimore Co., Md.

Early Jersey Wakefield Cabbage Plants in any quantity for Fall planting.  
Please apply for prices, &c.

**MORPHINE** NO CURE, NO FEE! Cured myself. DR. HAMILTON, Wetheredville, (Baltimore), Md.

**Go South.** If you can't go, do the next best thing. Send 50 cts. in stamps for the Monthly Cornucopia one year. You will get with it FREE a fine map of Norfolk and the great trucking section of the South. Send 2 cent stamp for sample copy.

A. JEFFERS, NORFOLK, VA.



# FOSTER

**\$45.25 BUGGIES**  
**\$5.25 HARNESS**  
 Sold DIRECT to Consumers.  
 ILLUSTRATED CATALOGUES FREE.  
 THE FOSTER BUGGY & CART CO. 22 Pike Bldg. CINCINNATI, O.

We sell as cheap to a Farmer who pays cash as we do to a wholesale dealer. One Price to All is our motto. We want to sell one Buggy and Harness in every county at once to show what bargains we have got. Our prices will surprise you. We are not in any pool or trust combination. **SAVE MONEY** by writing for catalogue.

## COLORA NURSERIES,

CECIL COUNTY, MD.

Grows Fruits, Flowers,

—AND—

Ornamental Trees,

And can supply you with anything in that line.

I have for the Fall of 1891, an especially fine lot of FRUIT TREES especially APPLES—Southern Winter Apples for Southern Planters; GRAPE VINES, Small Fruits, also a large collection of the best EVERGREEN TREES—Dwarf Arbor-Vite and Irish Juniper, Plants for Hedges & Screens. SHADE TREES for Street or Lawn. Roses and Greenhouse Plants, etc.

Write for what you want direct to the grower. I have given many years especial attention to this business, and will use my best endeavor to serve you well.

GEO. HALDERSTON, Colora, Md.

## ALL GARDEN SUPPLIES.

ROBERT J. HALLIDAY,

Florist, Seedsman,

And Importer and Dealer in

GARDEN REQUISITES.

(Established in 1837.)

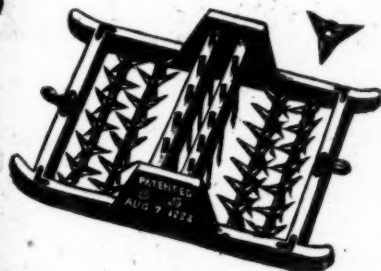
No. 8 S. Charles Street,

One door below Baltimore Street.

Where he will keep in great variety Decorative and Flowering Plants, Bulbs and Fruits; Flower and Vegetable Seeds, Implements and Tools; Florists' Supplies, Pots and Vases, Rustic Work, Terra-Cotta Ware, Jardinieres, Liquid Plant Food, &c. Several New Lines of Desirable Goods will be found added to his stock.

THE WONDERFUL

Pulverizing Harrow!



It saves much labor, pulverizes the ground nicely, brings it up from down beneath to above, makes it loose, mixes it well and thus makes every bit apt for the reception of the dung and seed. Try it and be convinced. For the farmer there is a marker attached, and for the gardener, we add a frame with four markers, two feet apart. For further particulars, Price, etc., address

HENRY F. GRAETZEL,  
Fullerton, Baltimore, Md.

**WM. FRASER,**  
Landscape Gardener and Florist,  
BELAIR AVENUE,  
BALTIMORE, MD.

Country Seats laid out, Gardens planted and kept. Trees planted and pruned; grading and sodding at lowest rates. Plans and estimates furnished. Orders by mail promptly attended to.

## SADLER'S BRYANT & STRATTON COLLEGE BALTO

FOUNDED IN 1864 by the present executive—27 YEARS of continuous and successful management—Increased annual attendance—Now occupying four buildings—Stands unrivaled in facilities for educating YOUNG MEN AND WOMEN for success in life. In deciding upon a school for their children, PARENTS should send them to THE BEST, because it pays. It may require the expenditure of a few dollars more at first, but it will prove the cheapest in the end. CHEAP tuition is very dear, because it means cheap teachers, cheap surroundings, inferior facilities, and offers NO opportunities for securing POSITIONS for its pupils and graduates. This Institution, owing to its HIGH standard of excellence, has placed in desirable positions more young men and women from Maryland, Virginia, North Carolina, South Carolina and Georgia, than all similar institutions combined. Catalogue and particulars mailed on application.

Address, W. H. SADLER, President, and Founder; or F. A. SADLER, Secretary,  
BUSINESS COLLEGE, 6, 8, 10 & 12 N. Charles St., BALTIMORE, MD.

## BALTIMORE NURSERIES.

Peach Trees a Specialty.

LARGEST STOCK IN THE COUNTRY.

1,000,000 Trees for Fall Trade.

500 Acres in Nursery Stock,

100 Acres in Orchards.

100 Acres in Small Fruits.

We offer to our customers an immense stock of Apples, Peaches, Cherries, Apricots, Grapes, &c., all the standard sorts. Also the new varieties of Fruits, Ornamental Trees, Shrubs, Roses, &c. Wholesale and retail. To dealers we can offer stock on favorable terms, and the best facilities for packing and shipping. Catalogues mailed on application. Agents wanted. Write for terms.

## FRANKLIN DAVIS & CO.,

Office—N. E. Corner Baltimore and Paca Streets, BALTIMORE, MD.

FRUIT AND ORNAMENTAL TREES.

Clairmont and Furley Hall Nurseries.

310 ACRES.

ESTABLISHED IN 1828.

Peach budded on natural Tennessee Seedlings only. Large stock of Apple, Peach, Pear, Cherry, Plum, and all other varieties of fruit trees, Grapes, Blackberries, Raspberries, Gooseberries, Currants, Asparagus Roots, Usage Orange and Evergreen Hedge Plants, Shade Trees and Evergreens of every variety. New and lately imported Flowering Shrubs, very handsome. Send for our catalogue. Wm. Corse & Sons, P. O. Box 405, Baltimore, Md. Office, 200 N. Calvert Street, near Lexington.

## Merryman's \$9.50 Incubator.

CAPACITY 150 EGGS.

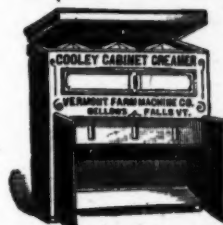
THE CHEAPEST HATCHER ON THE MARKET, AND AMONG THE BEST.

Send for Circulars. Address:

S. HOWARD MERRYMAN, Bosley, Balto. Co., Md.

## COOLEY CREAMERS

ARE THE MOST POPULAR AMONG DAIRYMEN.  
 BECAUSE THEY MAKE MORE BUTTER.  
 BECAUSE THEY MAKE BETTER BUTTER  
 BECAUSE THEY SAVE MOST LABOR



Because the PROCESS EXELS the animal heat IMMEDIATELY, and PREVENTS the development of BACTERIA, thus producing the PUREST FLAVOR, and accounting for the great number of Medals awarded viz:

**22 GOLD MEDALS**

and Silver Medals and First Premiums too numerous to mention. Illustrated catalogue free. VERMONT FARM MACHINE CO., BELLOWS FALLS, VT. Manufacturers of and Dealers in Churns, Butter Workers, Butter Printers and Carriers, Cheese Vats, Cream Vats, Engines, Boilers, and all Dairy and Creamery supplies.

## FRUIT EVAPORATOR

THE ZIMMERMAN  
The Standard Machine  
Different sizes and prices. Illustrated Catalogue free.  
THE BLYMER IRON WORKS CO., Cincinnati, O.

AGENTS WANTED to canvass for the sale of our home-grown NURSERY Stock. Most Liberal Terms. Unequalled Facilities. One of the Largest, oldest-established and best-known Nurseries in the country. Address—

W. & T. SMITH, GENEVA NURSERY,  
Established in 1846. Geneva, N. Y.

## PEACH TREES 3 1/2 to 4 feet, and APPLE TREES 5 to 6 feet,

FOR SALE  
in small and large quantities.  
Car load lots at very low prices.

Address GEORGE ACHELIS,  
West Chester, Chester Co., Pa.

## WANTED!

Experienced and Reliable Organizers  
—FOR THE—

Benevolent Endowment Fraternity.

The perfection of fraternal organizations. Conducted by solid Business Men, familiar with all the existing Fraternal Societies. Pays \$500 and \$1,000 at the end of 7 years.  
 " \$12.50 and \$25 sick benefits weekly.  
 " \$166.66 in case of total disability under 3 years membership.  
 " \$333.33 in case of total disability after 3 years membership.  
 " For a Home costing from \$1,000 to \$5,000 in seven years at a cost not exceeding ordinary monthly rental.

At the expiration of 4 years a member can draw three-tenths of the amount of certificate, and balance of the amount of certificate at the expiration of the seventh year. Certificate can be taken out every twelve months. Liberal Compensation. Address

L. JEFF MILBOURNE, Supreme Sec'y.  
Baltimore, Md.

822 Broadway, New York City.



FOR SALE.

A Rare Chance for Investment.

Two Farms, (50 and 86 acres,) improved, 18 acres unimproved. This property lies between the Washington and Baltimore Turnpike and the Baltimore and Ohio Railroad, fronting over a mile upon the latter, in Howard County, Md., one-quarter of a mile from Laurel depot, and in the immediate vicinity of the tract known as North Laurel, now being sub-divided for suburban residences. Land rolling, titles perfect. For further particulars inquire on the premises, or address by mail—

MRS. HANNAH STEIGER,

Box 16, LAUREL, Md

## 379 FRUIT TREES, Varieties VINES, PLANTS, Etc.

Apple, Pear, Peach, Cherry, Plum, Quince, Strawberry, Raspberry, Blackberry, Currants, Grapes, Gooseberries, &c. Send for catalogue. J. S. COLLINS, Moorestown, N. J.

**\$75.00 to \$250.00** A MONTH can be made working for us. Persons preferred who can furnish a horse and give their whole time to the business. Spare moments may be profitably employed also. A few vacancies in towns and cities. B. F. JOHNSON & CO., 1009 Main Street, Richmond, Va.

## PENNSYLVANIA ROUTE

Formed by the Northern Central and Pennsylvania Railroads on the West, Northwest and Southwest to

PITTSBURG, CINCINNATI,  
LOUISVILLE, INDIANAPOLIS,  
CHICAGO, ST. LOUIS AND  
OTHER PROMINENT POINTS.

Baltimore and Potomac, and Alexandria and Fredericksburg Railways on the South to

WASHINGTON, RICHMOND,

AND ALL POINTS IN THE

ATLANTIC AND GULF STATES.

THE ONLY ALL-RAIL LINE WITH NO OMNIBUS

TRANSFER AT WASHINGTON.

Northern Central and Philadelphia and Erie

Railways on the North to

HARRISBURG, WILLIAMSPORT,

ELMIRA, NIAGARA GLEN,

ROCHESTER, ERIE,

BUFFALO, NIAGARA FALLS.

Baggage called for and checked at the hotels and private residences through to destination. Sleeping and Parlor Car accommodations secured. Through tickets sold and information given at Company's office.

N. E. COR. BALTIMORE & CALVERT STS.,  
AT DEPOT N. C. RAILWAY,  
AT UNION DEPOT, CHARLES ST. STATION,  
AND PENNSYLVANIA AVE. STATION.

CHAS. E. PUGH, General Manager. J. R. WOOD, Gen'l Passenger Agent,  
Penna. & N. C. R. R.

## SOUTHERN MARYLAND Real - Estate - Agency,

1010 F STREET, N. W.,

WASHINGTON, D. C.

WANTED FOR PURCHASERS,  
Farms, desirably located and reasonable in price. Write, giving full description and all particulars.

G. H. CALVERT & Co.



**Elliot's Parchment Butter Paper. Half Ream FREE!**

To Dairy men and others who will use it, we will send half a ream, 8x11, free, if they will forward 30 cents to pay postage. Try the Best Butter Wrapper.

A. G. ELLIOT & CO., Paper Manufacturers, Philadelphia, Pa.

ESTABLISHED 1859.

**H. GIBSON,**

ALLEN STREET, - - LOCUST POINT, - - BALTIMORE.

Having placed the Latest Improved Machinery in my Factory, I am enabled to sell

**DRAIN TILE (with or without collars) SEWER PIPE & FIRE BRICK**

At Lowest Prices and equal to any in the Market.

**ROSEBANK NURSERIES.**

GOVANSTOWN, BALTIMORE COUNTY, MD.

Ornamental and Fruit Trees, Flowering Shrubs, Herbaceous Plants.

We invite the attention of the public to our select stock of the following: STANDARD AND DWARF PEARS—2, 3 and 4 years. APPLES—Standard and Dwarf. CHERRIES—Standard and Dwarf. APRICOTS, CRAB APPLES, MULBERRIES, GRAPEVINES, of the most popular kinds, together with other small fruits. Our collections of EVERGREENS, ORNAMENTAL TREES and SHRUBS are large, and embrace most of the rarest sorts.

Catalogues forwarded on application. Orders by mail promptly attended to.

All goods delivered in Baltimore free of charge.

W. D. BRACKEN IDG.

G. W. LEHMAN, Ph. D.,  
Chemist and Metallurgist,  
Baltimore Copper  
Works.

W. MAGER,  
Formerly Chemist of  
N. C. Fertilizer Con-  
trol Station.

LEHMAN & MAGER,  
CHEMISTS AND ASSAYERS,

111 S. Gay St., Baltimore, Md.

Analysis of all descriptions—Manures, Soils, Chemical Fertilizers, Ores of Gold and Silver by fire process, Copper, Lead, Manganese, etc. Clays, Coal, Limestone and other minerals. Water for steam, manufacturing and household use. Mineral waters and various products of art. Terms moderate.

**Cook Stove DRIER**

Handiest, Cheapest, Best. 12 sq. feet of Tray. Weight 25 pounds. Circulars Free. AGENTS  
AM. REFR. CO., Waynesboro, Pa.



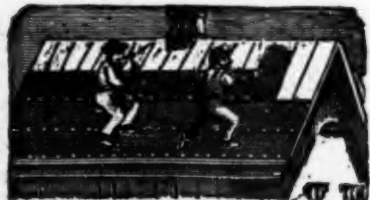
**NUT TREES.** Chestnuts—American and Giant, Perry's; Japan Walnuts; Japan Golden Rust; Idaho and Kleffer Pear; Klugman Longipes, Hardy Oranges, and other valuable novelties. Small Fruits, Grapes, &c. Fruit Shade and Nut Trees, Ornamental Shrubs, Vines, &c. Illustrated Descriptive Catalogue Free. W. J. PARRY, Parry, New Jersey.

**BALTIMORE COAL TAR AND MANUFACTURING COMPANY.**

Manufacturers of and Dealers in

**ROOFING MATERIALS**  
OF ALL KINDS.

Ready Roofing, Two-Ply and Three-Ply, Plastic Roof Coating.



Roofing Felt, Roofing Pitch, Gas Tar, Roofing Paint, Black Gloss Varnish.

Carbolic Acid and Carbolate of Lime.

The best disinfectants and preventatives against all diseases among horses and stock. Send for Circulars, Samples and Prices.

16 W. CAMDEN ST., BALTIMORE.

**WANTED  
WHEAT  
—AND—  
GRASS.**

The Whole of Europe wants WHEAT, and the most of America wants GRASS in abundance. 12 leading Agriculturists have written us essays on "How to Grow Wheat and Grass." These, in pamphlet form, we will send Free on receipt of three 2-ct. stamps.

—Members of the  
**Farmers' Alliance**

and Farmers' Clubs can have their Fertilizers made specially to order, at reduced prices.

**W. S. POWELL & CO.,**  
Baltimore, Md.,

CHEMICAL FERTILIZER MANUFACTURERS,  
AND IMPORTERS OF AGRICULTURAL CHEMICALS.

**HIGH CLASS**

**PLYMOUTH ROCK FOWLS**  
AND EGGS IN SEASON.

Bubach No. 5 Strawberry Plants \$4.00 per M.; other sorts, including Michel's Early and Hoffman; also Raspberry and Blackberry Plants. Choice Anne Arundel Canteloupe Seed.

Address R. S. OLIVER,  
HARMAN'S, A. A. Co., Md.

**SLINGLUFF & CO.**

Office, 300 W. Fayette St. Works, Foot Leadenhall St.  
BALTIMORE.

Manufacturers and Manipulators of

**PHOSPHATES.**

We are now offering to the trade the following well known Brands of Goods, which we guarantee fully up to the standard:

SLINGLUFF'S DISSOLVED GROUND BONE,

Containing 3 per cent. of Ammonia.

SLINGLUFF'S DISSOLVED SOUTH AMERICAN BONE ASH,

Containing 40 to 44 per cent. Soluble Bone Phosphate.

SLINGLUFF'S DISSOLVED SOUTH CAROLINA PHOSPHATE,

Containing 28 to 32 per cent. Soluble Bone Phosphate.

To meet the demand for a High Grade Fertilizer, we are offering

SLINGLUFF'S NATIVE SUPER-PHOSPHATE,

Prepared entirely from Animal Bone, Highly Ammoniated. Also

SLINGLUFF'S AMMONIATED SUPER-PHOSPHATE.

This we can confidently recommend as one of the Best Fertilizers in the market at any price.

ESTABLISHED 1855.

**GEORGE O. STEVENS,**

**WINDOW SASHES, 115 & 117 LIGHT ST.,**  
Baltimore, Md.  
**→ BLINDS & DOORS**

Bracket Shelves, Wooden Mantels, Mouldings, Window and Door Frames, Hotbed Sash, Sash Weights and Cord, Balusters, Newel Posts and Stair Rails, Brackets, Cornice and Sawn Work, Church Windows and Pews, Stained and other Fancy Glass. LINE, LUMBER and HAIR. If you want to BUILD CHEAPLY, send your orders to

**GEORGE O. STEVENS.**

**GEO. F. SLOAN & BRO.**

Lumber, Doors, Sash, Bricks, &c.

IN LOTS TO SUIT.

414 Light Street Wharf,

BALTIMORE.

ESTABLISHED 1811.

**A. E. WARNER.**

MANUFACTURER OF

**Silverware and Rich Jewelry,**

ENGLISH, SWISS AND AMERICAN WATCHES OF THE BEST MAKERS.

IMPORTER AND DEALER IN

DIAMONDS, FINE WATCHES, SILVER-PLATED WARE, TABLE CUTLERY, &c. WEDDING PRESENTS.

Premiums for Agricultural Fairs, Fine Bronzes, Opera Glasses, Shell Jewelry, &c. All of which are offered at Greatly Reduced Prices.

No. 131 East Baltimore Street, near Calvert.

**EASTERN SHORE NURSERIES.**

An extra fine assortment of the very best and most profitable varieties of Peaches. TREES ABSOLUTELY FREE FROM ALL TAIN OF DISEASE, AND STRICTLY TRUE TO NAME. Apple trees, a splendid stock, comprising the best known of early summer, market varieties, as well as the very CREAM of most profitable and desirable keeping kinds. Also Pear (Standard and Dwarf), Cherry, Apricot, Quince, with the finest and most complete assortment of Plum Trees in the country. Shade and Ornamental Trees, Grape Vines, Small Fruits of all kinds, Flowering Shrubby, &c., &c.

New price-list free to all applicants. Correspondence solicited. Address

**J. W. KERR,**

DENTON, CAROLINE COUNTY, MARYLAND.